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ABSTRACT

The question of whether the Job Corps's impacts on students' employment and related outcomes differ according to the characteristics of the Job Corps center attended was examined. The study sample consisted of approximately 9,400 program group members and 6,000 control group members who were randomly selected from among the nearly 81,000 applicants nationwide who applied for Job Corps services for the first time between November 17, 1994, and December 16, 1995, and were found eligible for services by February 1996. Study participants were interviewed shortly after their random assignment and 12, 30, and 48 months thereafter. Job Corps impacts were similar for contract centers and Civilian Conservation Centers. Impacts were similar in large, medium, and small centers. The beneficial impacts of the Job Corps program overall were broadly distributed throughout the country and not confined to a few regions. Impacts were similar for centers rated as high-performing, medium-performing, and low-performing centers based on the Job Corps performance measurement system. As expected, outcomes of the program group were better among the high-performing centers. However, so too were the outcomes of the control group who would have attended the high-performing centers. (Twenty-eight tables/figures are included. Eight supplementary tables are appended.) (MN)

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National Job Corps Study: Impacts by Center Characteristics

June 2001

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In addition, several people contributed more directly to the present report. Ruo-Jiao Cao provided excellent research support and produced the tabulations reported here. Daniel Ryan, DOL project officer for the National Job Corps Study, provided comments that improved both the completeness and presentation of the report. Walter Corson reviewed a draft of the report and provided valuable comments. We also benefited from discussions with Terry Johnson and Mark Gritz at Battelle about the findings presented here. Walter Brower and Patricia Ciaccio provided excellent editorial assistance. Jill Miller and Monica Capizzi produced the report with great skill and good humor.

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EXECUTIVE SUMMARY

Job Corps is a major part of federal efforts to provide education and job training to disadvantaged youths. It provides comprehensive services--basic education, vocational skills training, health care and education, counseling, and residential support. More than 60,000 new students ages 16 to 24 enroll in Job Corps each year, at a cost to the federal government of more than $1 billion per year. Currently, the program provides training at 119 Job Corps centers nationwide. The National Job Corps Study is being conducted under contract with the U.S. Department of Labor (DOL) to provide Congress and program managers with the information they need to assess how well Job Corps attains its goal of helping students become more employable, productive citizens.

This report is one of a series of reports presenting findings from the study. It examines whether the impacts of Job Corps on students' employment and related outcomes differ according to the characteristics of the Job Corps center that a student attended. Overall, Job Corps increased education and training, increased earnings, and reduced youths' involvement with the criminal justice system. This report asks: Were these positive findings concentrated at centers with certain characteristics or in certain regions of the country, or were they similar across diverse centers in the system? The center characteristics considered are type of operator, student capacity, region of the country, and performance ranking.

STUDY BACKGROUND

The cornerstone of the National Job Corps Study was the random assignment of all youths found eligible for Job Corps to either a program group or a control group. Program group members were permitted to enroll in Job Corps, and control group members could not (although they could enroll in other training or education programs). The research sample for the study consists of approximately 9,400 program group members and 6,000 control group members randomly selected from among the nearly 81,000 applicants nationwide who applied for Job Corps for the first time between November 17, 1994, and December 16, 1995, and were found eligible by February 1996. Data used to estimate impacts are from interviews conducted at baseline (shortly after random assignment), and at 12, 30, and 48 months after random assignment.

To support analysis of the effects of center characteristics, Job Corps admissions counselors were asked to record on a special study form the name of the Job Corps center that they believed each applicant was likely to attend. This information was provided before random assignment was performed, so it is available for both the program group and the control group. Moreover, admission counselors' predictions proved to be very accurate for those program group members who ultimately enrolled in Job Corps. Because of the high coverage and accuracy of the center assignment designations, we are able to compare the outcomes of program group members for specified groups of centers exhibiting a particular characteristic (say, large capacity) with the outcomes of control group members who were designated for the same centers. These types of comparisons form the basis for the analyses reported here. Data for individual students were reweighted in such a way that the weighted count of eligible applicants assigned to each center is the same for each center.

TYPE OF OPERATOR

Impacts were similar for contract centers and Civilian Conservation Centers (CCCs). Most Job Corps centers are operated by private organizations under competitively awarded contracts with DOL. At the time of the study, approximately 80 contract centers served about 88 percent of new students. Thirty CCCs were operated by agencies of the U.S. Department of Agriculture and the U.S. Department of the Interior. The two types of centers differ in several important ways. First, staff at CCCs are federal civil service employees, while contract center staff are employees of private for-profit and nonprofit organizations. Second, to continue operating their centers, operators of contract centers must win competitive procurements, while CCCs are not subject to this requirement. Third, nearly all CCCs are small (225 students or less) and most are located in isolated rural areas, while contract centers range in size from 200 to more than 2,000 students. Fourth, at CCCs, the trades offered are heavily weighted toward construction trades, much of the vocational training offered is through national training contractors, and much of the training is through hands-on work projects aimed at improving National Forest and National Park facilities. In contrast, at contract centers, trades are more diverse, more likely to be provided by center operator staff, and less likely to entail work projects.

The characteristics of students at CCCs and contract centers differ in several noteworthy ways as well. At CCCs, more students are male, under age 18 at enrollment, without a high school credential at enrollment, and likely to have been arrested. CCCs are more likely to be in the Pacific Northwest or Mountain states. Reflecting this locational difference, a higher proportion of CCC students are from small towns and a higher percentage are white, non-Hispanic.

Despite the many differences between CCCs and contract centers, students at a typical CCC and contract center had similar gains in attainment of the GED or vocational certificate over the follow-up period, similar gains in weekly earnings during the 4th year after random assignment, and similar reductions in the percentage arrested over the 48-month follow-up period.

CENTER CAPACITY

Impacts were similar in large, medium, and small centers. The capacity of Job Corps centers ranges from 200 to more than 2,000 students. Capacity may affect students' experiences and, thus, impacts in several ways. Large centers may offer more diverse recreational and vocational training opportunities. Yet in large centers it may be more difficult to create the connections among staff and students that foster successful learning.

The characteristics of students are similar at medium centers (226 to 495 slots) and large centers (496 or more slots). At small centers (225 or less), however, more students are under 18 years old, high school dropouts, white, and from a small town.

Impacts for key education and earnings outcomes were positive for all three center size groups. The estimated year 4 earnings gains were somewhat larger at the larger centers, although the difference in earnings impacts is not statistically significant. Large reductions in arrests occurred at the small and medium centers but not at the large centers.

REGION

Impacts were positive in most regions. Regions are an important administrative unit within Job Corps. Regional office staff not only contract for center operation, outreach and screening, and placement in each region, but they also provide oversight and leadership. Each region also has a distinctive mix of large- and small-capacity centers, CCCs and contract centers, and urban and rural centers. Furthermore, there are differences across regions in the gender mix, ethnic composition, and high school completion status of Job Corps students.

The positive overall impacts of Job Corps occured in most regions, although the earnings gains were small (or even negative) and not statistically significant in a few regions. Impacts on GED attainment were positive and statistically significant in all regions. Similarly, impacts on arrest rates were negative in all regions and statistically significant in four of the nine regions. Impacts on earnings were positive and statistically significant in five regions, positive but not statistically significant in two regions, and negative but not statistically significant in two regions.

The analysis indicates that the beneficial impacts of the program overall were broadly distributed throughout the country and not confined to a few regions. We do not believe the patterns of difference in impacts across regions lends itself to any programmatic interpretation.

PERFORMANCE LEVEL

Impacts were similar for centers rated as high-, medium-, and low-performing centers based on the Job Corps performance measurement system. The Job Corps performance measurement system is intended to focus staff throughout Job Corps on ensuring that students achieve important milestones in Job Corps and positive outcomes after the program. Our process study concluded that this goal of the performance measurement system is met: Job Corps is a performance-driven system. Center staff, and especially managers, are aware of standards and care about their center's ranking. Center managers use the system for day-to-day management, and many receive financial incentives linked to center performance.

The performance management system used during the period when study sample members participated in Job Corps incorporated a series of measures in three areas: (1) program achievement measures, including reading gains, math gains, GED attainment rate, and vocational completion rate; (2) placement measures, including the rate of placement into work or further education, the average wage at placement, the percentage of students placed in a job that matched their training, and the percentage engaged in work or training full-time; and (3) during the first year (program year [PY] 1994), the ratings of regional office staff. Using standards set by the national office, each center's outcomes on each measure are compared to the national standard and expressed as a percentage of the national standard. The overall performance score is a weighted average of the individual measures. Each center's performance ranking is determined by its overall score.

The measures, standards, and weights for summing individual measures are established for each program year and change annually. Since sample members in the National Job Corps Study were enrolled during PY 1994 to PY 1996, and since performance rankings differed markedly in the three years, high-performing centers were defined for this analysis as those that were in the top third of the performance ranking during PY 1994, PY 1995, and PY 1996. Similarly, low-performing centers are those that were in the bottom third of the performance ranking in each year. The high- and low-performing groups each comprise just under one-fifth of centers. The remaining centers were designated medium-performing centers.

The impacts of Job Corps were similar across the three performance groups. Low-performing centers had essentially the same impacts as high- and medium-performing centers. As one would expect, outcomes of the program group were better among the high-performing centers. However, so too were the outcomes of the control group who would have attended the high-performing centers.

I. INTRODUCTION

Job Corps is a major part of federal efforts to provide education and job training for disadvantaged youths. It provides comprehensive services: basic education, vocational skills training, health care and education, counseling, and residential support. More than 60,000 new students between the ages of 16 and 24 enroll each year, at an annual cost to the federal government of more than $1 billion.

The National Job Corps Study, funded by the U.S. Department of Labor (DOL), is expected to provide Congress and program managers with the information they need to assess how well Job Corps attains its goal of helping students become employable, productive citizens.[1] The cornerstone of the study was the random assignment of all youths found eligible for Job Corps to either a program group or a control group. Program group members were permitted to enroll in Job Corps, and control group members were not (although they could enroll in other training or education programs). The research sample for the study consisted of approximately 9,400 program group members and 6,000 control group members randomly selected from among the nearly 81,000 first-time applicants nationwide who applied from November 17, 1994, through December 16, 1995, and were found eligible by February 29, 1996.

This report presents findings on whether the impacts of Job Corps differ according to the characteristics of the center that a student attended. It builds on the analysis and findings presented in our main report on impacts, "National Job Corps Study: The Impacts of Job Corps on Participants' Employment and Related Outcomes" (Schochet et al. 2001). That report found that Job Corps produced large gains in time spent in education and training, large gains in receipt of a high school

[1]The study is being conducted by Mathematica Policy Research, Inc. (MPR) and its subcontractors, Battelle Human Affairs Research Centers and Decision Information Resources, Inc.

credential, substantial gains in weekly earnings in the third and fourth year after a youth was found eligible for Job Corps, and reductions in arrest rates. Most of the benefits were found broadly across diverse groups of students. We also found that the residential program and nonresidential program within Job Corps were each effective for the students assigned to these services.

This report examines whether these positive findings are concentrated among students at Job Corps centers with certain characteristics or, alternatively, were similar across diverse centers in the system. Specifically, do the net impacts observed over the four years after youths applied and were determined to be eligible for Job Corps vary according to:

- Whether the center was a Civilian Conservation Center (CCC) or contract center
- The number of students the center is designed to serve
- The region of the country in which the center is located
- Whether the center was a high-, medium-, or low-performing center as measured by the Job Corps performance measurement system

The report uses the same data and outcome measures as were used in the analysis of impacts on labor market and related outcomes over the 48 months after youths were determined to be eligible for Job Corps. The analytic approach is modified to recognize that centers, not students, are the unit of analysis.

The rest of this chapter first describes the Job Corps program, focusing on the administrative structure and the key role that centers play in delivering Job Corps services. We then discuss the goals of this analysis in more detail and describe the analytic approach used to estimate the influence of center characteristics.

A. OVERVIEW OF JOB CORPS

Established by the Economic Opportunity Act of 1964, the Job Corps program operated under provisions of the Job Training Partnership Act (JTPA) of 1982 during the study period.[2] Job Corps uses a well-defined program model (documented in Johnson et al. 1999), which had been refined continually over 30 years at the time our study sample attended in 1995 and 1996, and which has continued to evolve since the study period. Because many Job Corps centers are located some distance away from the home areas of the students who attend the centers, different organizations have traditionally performed three key programmatic functions. These functions are (1) recruiting and screening students, (2) operating center programs, and (3) helping youths find jobs or further training after they leave Job Corps.

A complex operational structure, with multiple levels of administrative accountability and numerous contractors and subcontractors, supports the program. DOL administers Job Corps through a national office and nine regional offices. The national office establishes policy and requirements, develops curricula, and oversees major program initiatives. One example of a national office initiative is the continual development of the Job Corps performance measurement system, which has been in place for nearly two decades. We will discuss the performance measurement system in more detail below and in Chapter IV.

Regional offices of DOL procure and administer contracts and perform oversight activities, such as reviews of center performance. DOL uses a competitive bidding process to contract out center operations, recruitment and screening of new students, and placement of students into jobs and other educational opportunities after they leave the program. At the time of the study, 80 centers were operated under competitive contracts. In addition, the U.S. Department of Agriculture (USDA) and

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[2]Beginning in July 2000, Job Corps has operated under provisions of the Workforce Investment Act (WIA) of 1998.

the U.S. Department of the Interior operated 30 centers (the CCCs) under interagency agreements with DOL.[3] Job Corps centers are in all regions of the country and in most states. Figure I.1 displays the nine Job Corps regions and shows the location of the 105 Job Corps centers that were operating in the 48 contiguous states at the time the program group members were enrolled.[4]

Next, we briefly describe the three main program elements.

1. Outreach and Admissions

Outreach and admissions (OA) agencies provide information to the public through outreach activities, describe the program to youths who apply, screen youths to ensure that they meet the eligibility criteria, assign youths to centers (when the regional office delegates this function), and arrange for transportation to centers. OA agencies include private nonprofit firms, private for-profit firms, state employment agencies, and the centers themselves. At the time of the study, 41 percent of all students were screened by private organizations that were not centers, 30 percent were screened by centers that also held an OA contract, and 29 percent were screened by state employment security agency personnel. The use of these various types of OA agencies varied widely across regions (see Johnson et al. 1999).

2. Center Operations

Centers are the heart of the Job Corps program. Each center provides comprehensive and intensive services that include basic education, vocational training, residential living, health care and education, and counseling.

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[3]Currently, 90 contract centers and 28 CCCs are providing Job Corps training.

[4]Five centers in Alaska, Hawaii, and Puerto Rico were not part of the study.

FIGURE I.1

JOB CORPS REGIONS IN PY 1995

• Indicates Job Corps Center

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Education. Education programs in Job Corps are individualized and self-paced, and they operate on an open-entry and open-exit basis. The programs include remedial education (emphasizing reading and mathematics), world of work (including consumer education), driver's education, home and family living, health education, programs designed for those whose primary language is not English, and a General Educational Development (GED) program of high school equivalency for academically qualified students. About one-fifth of the centers can grant state-recognized high school diplomas.

Vocational Training. As with the education component, the vocational training programs at Job Corps are individualized and self-paced and operate on an open-entry, open-exit basis. Each Job Corps center offers training in several vocations; these typically include business and clerical, health, construction, culinary arts, and building and apartment maintenance. National labor and business organizations provide vocational training at many centers through contracts with the Job Corps national office. Union members teach these classes at the centers.

Residential Living. The residential living component distinguishes Job Corps from all other publicly funded employment and training programs. The idea behind residential living is that, because most participants come from disadvantaged environments, they require new, more supportive surroundings to derive the maximum benefits from education and vocational training. All students must participate in formal social skills training. The residential living component also includes meals, dormitory life, entertainment, sports and recreation, center government, center maintenance, and other related activities. Historically, regulations had limited the number of nonresidential students to 10 percent, but Congress raised that limit to 20 percent in 1993. About 12 percent of Job Corps study program group participants were nonresidential students.

Health Care and Education. Job Corps centers offer comprehensive health services to both residential and nonresidential students. Services include medical examinations and treatment; biochemical tests for drug use, sexually transmitted diseases, and pregnancy; immunizations; dental examinations and treatment; counseling for emotional and other mental health problems; and instruction in basic hygiene, preventive medicine, and self-care.

Counseling and Other Ancillary Services. Job Corps centers provide counselors and residential advisers. These staff members help students plan their educational and vocational curricula, offer motivation, and create a supportive environment. Support services are also provided during recruitment, placement, and the transition to regular life and jobs following participation in Job Corps.

3. Placement

The final step in the Job Corps program is placement, which helps students find jobs in training-related occupations with prospects for long-term employment and advancement. Placement contractors may be state employment offices or private contractors; sometimes, the centers themselves perform placement activities. Placement agencies help students find jobs by providing assistance with interviewing and resume writing and services for job development and referral. They also distribute the readjustment allowance, a stipend students receive after leaving Job Corps.

B. REPORT OBJECTIVES

While Job Corps' well-defined service model distinguishes it from many other job-training programs, individual centers differ greatly along many dimensions. Some kinds of variations may directly influence whether or not the program generates earnings gains for its students or reduces

their involvement with the criminal justice system. This report focuses on four dimensions of center variation: (1) type of operator, (2) size (capacity), (3) region, and (4) performance ranking.

Type of Operator. The fundamental difference between CCCs and contract centers is that CCCs are operated by agencies within the U.S. Department of the Interior and the USDA, whereas contract centers are operated under competitively awarded contracts with the federal government. This basic difference has several implications. For one thing, CCC staff are federal civil service employees, whose agencies have agreements with DOL to operate the centers on National Park Service land (in the case of the Department of the Interior CCCs) or on National Forest Service land (in the case of those run by the USDA). In contrast, contract center staff are not civil service employees. In addition, CCCs generally continue to operate the same centers year after year, with no change in operator.[5] Contract center operators, in contrast, hold contracts for a specified period, which may include option periods. If an incumbent operator wishes to continue operating the center after the contract period, it must compete with other organizations and win the competition. While there is considerable stability because good performance is rewarded with additional contracts, the mix of contractors does change over time.

Location and historical factors have created a number of other differences between CCCs and contract centers. Since CCCs are located on National Park Service or National Forest Service land, they are primarily (though not exclusively) in isolated rural areas. In addition, CCCs tend to be small, with capacity for about 225 students per center. At CCCs, national business and labor organizations are more likely to provide vocational training, trades offered are more likely to be in construction, and teaching is more likely to occur through hands-on building projects designed to enhance Park Service or Forest Service lands than is the case at contract centers.

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[5]In recent years, DOL has closed a few CCCs because of unsatisfactory performance.

Contract centers differ from CCCs along other dimensions. More contract centers are located in or near urban areas. Their capacity varies from 200 to more than 2,000 slots. More diverse trades are offered; construction trades are not the primary area of vocational training. Vocational training staff are more likely to be center operator employees, and actual work projects form a smaller proportion of the vocational training time, even in construction trades.

Center Size. The capacity of Job Corps centers ranges from about 200 students to more than 2,000. Size may affect net impacts on student outcomes. Large centers may be able to provide students with a wider array of vocational training opportunities and a greater number of recreational opportunities. In addition, large centers may realize some economies of scale and lower costs per student. However, a large scale of operation may make it more difficult to create the connections between staff members and students that are thought to be important to successful learning.

Region. We assess whether positive impacts are concentrated geographically or are widely dispersed across the country. Several considerations led us to use Job Corps regions as the geographic unit for this analysis. First, regions are a key administrative unit within Job Corps. Regional office staff select contract center operators, monitor compliance of all centers with programmatic requirements, provide leadership, and foster interchange among staff in the region through meetings and work groups. Second, the average characteristics of Job Corps students differ markedly across the regions in gender mix, ethnic composition, and high school completion status. Third, regions may differ in the economic conditions that disadvantaged youths face, including the types and quality of jobs, education, and training opportunities available to them.

Level of Measured Performance. Job Corps has one of the most comprehensive systems for managing the performance of centers and center operators of any education and training program. The Job Corps performance measurement system has been an integral part of the program's

accountability system for more than 15 years. At the time our program group was enrolled in Job Corps, the system for Job Corps centers was in full operation. In addition, performance measurement systems for OA and for placement were being developed and implemented during the period of the study.

Our process study (Johnson et al. 1999) concluded that the center performance measurement system has helped make Job Corps a performance-driven program. The contracting process creates financial incentives for centers to achieve a high level of measured performance. Regional offices are more likely to exercise the option years in the contracts of high-performing centers and less likely to do so for low-performing ones. Center staff are aware of and care about the ranking of their center relative to other centers. Over time, measured performance has improved. This improvement reflects the combined effects of greater staff attention to outcomes that the system has promoted and of programmatic initiatives designed to improve student outcomes. As with other aspects of Job Corps, the structure of the performance measurement system continues to evolve.

This report examines whether the level of measured performance of centers is associated with the size of net impacts on educational attainment (GED attainment and vocational training completion), postprogram earnings, and arrest rates. Do higher-performing centers achieve larger impacts than lower-performing centers? While the performance measurement system focuses centers on achieving positive student outcomes, it is by no means clear that better student *outcomes* necessarily reflect a greater *impact* of the program.

C. ANALYTIC APPROACH

The analysis of the effects of center characteristics uses the predictions that OA counselors made about which center each sample member was likely to attend. As part of the application process, OA counselors were asked to record on a special study form (the ETA-652 Supplement form) which

center each applicant was likely to attend; OA staff sent these forms to MPR for those youths determined to be eligible for the program, and MPR entered the information into the study's database.

Because the likely center designation was collected prior to random assignment, it is available for both program *and* control group members. Accordingly, we estimated impacts for a particular center characteristic by comparing the distribution of outcomes for the program and control group members assigned to centers with that characteristic. For example, the impacts of CCCs were estimated by comparing the distribution of outcomes of program group members predicted to attend a CCC with those of control group members predicted to attend one. Similarly, the impacts of the contract centers were estimated by comparing the experiences of program and control group members predicted to enroll in contract centers. Standard statistical tests were used to gauge the statistical significance of these impact estimates and to test whether differences in impacts were due to chance.

We believe that the analysis produced reliable estimates of program impacts for centers with particular characteristics because "predicted center" is available for nearly all sample members, and the predictions were very accurate. Specifically, the data item was provided for 93 percent of our sample (missing for 7 percent). Using Student Pay, Allotment, and Management Information System (SPAMIS) information on program group members who enrolled in centers, we found that about 93 percent of program group enrollees actually enrolled in the center the OA counselor had predicted.

An important point about the interpretation of the impact findings for center characteristics is that they tell us about the effectiveness of the program *for youths who are typically assigned to centers with a given characteristic*, because we compare the outcomes of program and control group members who selected or were assigned to a center with the characteristic. If (1) the characteristics

of students differ at different types of centers (for example, CCC and contract centers), and (2) the impacts for students with these characteristics differ, the analysis will tell us about the impacts of this group of centers, not for the average Job Corps student, but only for the students who actually enrolled in each type of center. Put another way, the results cannot necessarily be used to measure the effectiveness of each center type for the *average* Job Corps student.

An alternative approach is to use multivariate models to control statistically for the effects of student characteristics and center attributes on outcomes. This method examines the effects of center attributes on impacts, holding constant student compositional characteristics of the centers.

The two approaches address different policy questions. If the policy question of interest is, Should Job Corps make incremental increases in the number of centers with a particular attribute such that all centers continue to serve the same broad mix of students?, then the simple comparison of the program and control groups at each type of center is the most appropriate approach. If the policy question is, Should Job Corps completely eliminate one type of center?, then the more relevant research question is, How does each type of center serve the average student? In this case, use of the multivariate model is the most appropriate approach.

We believe that the simple univariate approach is more appropriate for most of our analysis than the multivariate approach, for several reasons. First, Job Corps has been making incremental rather than broad changes for many years. For example, Job Corps has not replaced a large number of small centers with large centers or a large number of CCCs with contract centers. Instead, the program has expanded more uniformly across different types of centers. Second, impact results from the multivariate approach are more difficult to interpret, because it is difficult to determine the extent to which differences in impacts across centers are due to differences in center attributes or to differences in student and local area characteristics across centers. The multivariate approach can

control for some student and local area factors, but there are likely to be unobserved factors that cloud the results. The univariate results are more easily interpretable because this approach does not attempt to estimate "causal" relationships.

A related issue is the relevant unit of analysis for our study. Centers are a natural unit of analysis for Job Corps program managers. Opening and closing centers is a way to change the overall capacity of the system. Managers focus on center operations when considering ways to improve the program. The performance management system tracks each center and considers all centers on an equal footing, regardless of the number of students they serve. Because program managers focus on centers, this report uses centers as the unit of analysis, which allows us to address the following question: For a typical contract center (or CCC, or high- or low-performing center), what is the average impact of Job Corps for students who are assigned to this type of center?

It is noteworthy that this question differs in nature from the one in the impact report (Schochet et al. 2001). The analysis presented in our main impact report focused on students. It addressed the question, What is the impact of Job Corps for the average student? Because the objective was to estimate such impacts, we randomly selected the study's control and program research group from all eligible applicants with similar probabilities of selection, an efficient sample design for that study objective. However, large centers contribute more than small centers in the analysis focused on students. In an analysis focused on centers, each center should have an equal weight, regardless of the number of students that were assigned to the center. Accordingly, for the analysis presented in this report, we reweighted the data for each student in such a manner that each center has an equal weighted count of students. Because of the large difference in the value of the weights assigned to

sample members from large and small centers, this reweighting results in a loss of precision relative to the precision of the main analysis.[6]

D. OUTCOME MEASURES

The impact analysis assessed the effects of Job Corps on a broad range of outcomes in education and training, employment, welfare, criminal justice, family formation, and other areas. We found that during the 48-months after random assignment, Job Corps participation led to increases in hours spent in education and training and the likelihood of earning a high school credential, and to reductions in the likelihood of an arrest. It also produced gains in hours of employment and earnings during the third and fourth year after random assignment.

The present analysis examines whether the impacts were similar across groups of students defined according to the center the student was assigned to attend. We examine impacts on several outcomes across four areas:

1. ***Educational Services***--the percentage of youths who participated in education or training, and the weeks and hours per week of participation in education or training

2. ***Educational Attainment***--the percentage of youths who had received a GED, the percentage who received a high school diploma, the percentage who received either a GED or a high school diploma, and the percentage who received a vocational training certificate

3. ***Earnings***--average earnings per week during each year after random assignment, especially the largely postprogram third and fourth years

4. ***Arrests***--the percentage of youths who were ever arrested during the 48-month follow-up period and the percentage arrested during the first year of the follow-up period

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[6]This precision loss due to unequal weighting of the sample has been appropriately accounted for in computing standard errors and statistical tests reported here.

For the analysis of impacts by level of center performance, we also analyze whether the youth reported receiving a vocational certificate. We include this additional outcome for the analysis by level of center performance because of its similarity to a key measure used in the performance measurement system.

For each measure, we present the mean value for all program group members, the mean for all control group members, the difference between this value (impact for eligible applicants) and its statistical significance, the mean value for participants only (excluding program group members who did not enroll in Job Corps), and the impact per participant.[7] Impacts on these measures are presented for all the center characteristics discussed above.

[7]Impacts per participant are calculated as impacts per eligible applicant divided by the group's rate of participation in Job Corps. Schochet et al. (2001) describes the rationale and assumptions for estimating impacts per participant.

II. IMPACTS, BY CENTER OPERATOR AND CENTER CAPACITY

The experiences of Job Corps students may differ according to the type of operator and the size of the center in which they enroll. Consequently, program impacts may differ by center operator and center capacity. Contract centers are operated by private organizations under contract with the U.S. Department of Labor (DOL). Civilian Conservation Centers (CCCs) are operated by the U.S. Park Service and the U.S. Forest Service under interagency agreements with DOL. Centers range in size from approximately 200 students to more than 2,000, although only four exceed 735. This chapter presents findings on the impacts for students at a typical CCC and contract center and at a typical small, medium, and large center.

A. CONTRACT CENTERS AND CCCs

CCCs comprised 30 of 105 centers attended by members of the program group; the other 75 centers were contract centers.[1] CCCs differ from contract centers along several dimensions (Table II.1): CCC staff are federal civil servants, and CCCs are generally small (87 percent have less than 225 slots) and located away from large population centers (70 percent are in rural areas). More CCCs offer training in construction trades, carpentry, and masonry--this training is provided by national contractors through hands-on work projects to improve federal lands. In contrast, contract centers are staffed by employees of private companies, their capacity and locations are more diverse, and the trades they offer are more varied and more likely to be provided by the center operator.

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[1]Tabulations of center-level data include the 103 centers attended by study participants that operated during Program Year (PY) 1995. Two contract centers attended by a few study participants (Knoxville and Tuskegee) operated in PY 1994 but were closed in PY 1995.

TABLE II.1

CHARACTERISTICS OF CONTRACT CENTERS AND CCCs
(Percentage of Centers in Center Type Category)

	Contract Centers	CCCs	All Centers
Size			
Small	16.4	86.7	36.9
Medium	61.6	13.3	47.6
Large	21.9	0.0	15.5
Location			
Inner city	23.3	0.0	16.5
Urban	34.3	6.7	26.2
Suburban	37.0	23.3	33.0
Rural	5.5	70.0	24.3
Performance Ranking			
High	16.4	16.7	16.5
Medium	65.8	66.7	66.0
Low	17.8	16.7	17.5
Offers High School Diploma	21.9	16.7	20.4
Trades Offered			
Business	100.0	76.8	92.2
Mechanical	42.5	26.7	37.9
Service	69.9	13.3	53.4
Building and maintenance	91.8	70.0	85.4
Construction	78.1	96.7	83.5
Carpentry	74.0	100.0	81.6
Masonry	54.8	93.3	66.0
Welding	45.2	80.0	55.3
Health	94.5	30.0	75.7
Food serviee	90.4	80.0	87.4
Other	49.3	26.7	42.7
Number of Centers	**73**	**30**	**103**

SOURCE: SPAMIS, On Board Strength Report, PY 1995; National Job Corps Study Center Mail Survey.

CCCs and contract centers attract very different groups of students (Table II.2). A larger percentage of contract center students are female: nearly half, compared to less than one-fourth at CCCs. The CCCs probably enroll a smaller proportion of females because of the remoteness of CCCs from urban areas and their focus on traditionally male-oriented construction trades. A larger percentage of CCC students are younger than 18 (51 percent, compared to 41 percent at contract centers), and thus a larger percentage had not completed 12th grade (85 percent, compared to 78 percent of students assigned to contract centers). Reflecting the greater percentage who are male, a larger percentage of students at CCCs had been arrested before they applied to Job Corps (more than one-third, compared to one-fourth of students at a typical contract center).

CCCs are more concentrated in a few regions. Nearly half of all CCC students are from Regions 7/8 (Mountain and Plains states) and Region 10 (Northwest), compared to only 13 percent of contract center students from these regions. This geographic concentration of CCCs leads to a higher percentage of white, non-Hispanic students at CCCs than at contract centers (54 percent, compared to 24 percent).

Finally, in line with the tendency for CCCs to draw students disproportionately from the sparsely populated Mountain and Plains states and Pacific Northwest, more students assigned to CCCs came from a town with a population of 10,000 or less (34 percent, compared to 19 percent of students assigned to contract centers), and fewer came from a city with a population of 250,000 or more (20 percent, compared to 43 percent of students assigned to contract centers).

Comparing the experiences of the *control group* assigned to CCCs and contract centers provides some insight into the combined effect of differences across these centers in the opportunities available to youths who were eligible for Job Corps but who did not have the opportunity to attend, and in the inclination of these youths to pursue alternative education and employment opportunities.

TABLE II.2

CHARACTERISTICS OF ELIGIBLE JOB CORPS APPLICANTS ASSIGNED TO CONTRACT CENTERS AND CCCs
(Percentage of Students Assigned to a Typical Center of Each Type)

	Contract Centers	CCCs	All Centers
Percentage Female	45.4	22.0	38.7
Percentage 16 to 17 Years Old	40.9	51.1	43.8
Percentage Who Had Not Completed 12th Grade	78.4	84.5	80.1
Percentage Black, Non-Hispanic	49.3	27.6	43.1
Percentage White, Non-Hispanic	24.2	53.8	32.6
Percentage Hispanic	17.9	10.9	15.9
Percentage American Indian, Asian or Pacific Islander, or Other	8.6	7.7	8.3
Percentage Ever Arrested or Charged with Delinquency	24.7	37.6	28.2
Size of Hometown Population			
10,000 or less	19.2	34.3	23.9
10,000 to 50,000	18.6	27.0	21.0
50,000 to 250,000	18.8	18.5	18.7
More than 250,000	43.4	20.2	36.8
Job Corps Region			
1	5.1	0.0	3.8
2	7.9	6.8	8.0
3	13.3	6.8	11.3
4	22.4	23.5	23.2
5	11.8	6.7	9.6
6	15.9	9.6	14.0
7/8	9.1	23.4	12.3
9	10.6	0.0	8.2
10	4.0	23.2	9.6

SOURCE: Baseline interview data.

NOTE: Figures are means of the percentage of students assigned to centers in each center category who possess the indicated attribute. We computed the percentage with a given attribute in each center and then computed the average of the means across centers in a category.

Unfortunately, we are not able to determine the extent to which observed differences between control group members assigned to CCCs and contract centers reflect their characteristics or their opportunities.

Because students assigned to CCCs are concentrated in certain regions and come from smaller cities, and because their characteristics are so different, we might expect the experiences of the control group assigned to CCCs to differ from those of the control group assigned to contract centers. Figure II.1 shows the education and training activities and educational attainment of youths assigned to the two types of centers but who had to seek other options because they were assigned to the control group. As the data indicate, control group members at contract centers and CCCs had nearly identical likelihoods of participating in education or training and of earning a high school credential (either a GED a or high school diploma) or vocational training certificate. Figure II.2, however, shows somewhat different earning profiles and likelihoods of arrest during the follow-up period. While average weekly earnings were similar in the first year after random assignment, control group members assigned to CCCs had substantially higher average weekly earnings in years 2, 3, and 4 after random assignment (although these differences are not statistically significant).

Because CCCs and contract centers each offer a unique combination of program features that the other could not duplicate, our analysis of the effects of center operators focuses on the impacts of each type of center for the students each type of center currently serves. Accordingly, we compare the outcomes of program and control group members without adjusting for the possible effects of student characteristics on the size of the impacts.

Impacts on receipt of education and training were large at both contract centers and CCCs (Figure II.3). Impacts on receipt of a vocational certificate were also large and similar. However, CCCs had a larger impact on receipt of a high school credential than did contract centers (24

FIGURE II.1

EDUCATION AND TRAINING ACTIVITIES AND EDUCATIONAL ATTAINMENT OF THE CONTROL GROUP, BY TYPE OF CENTER

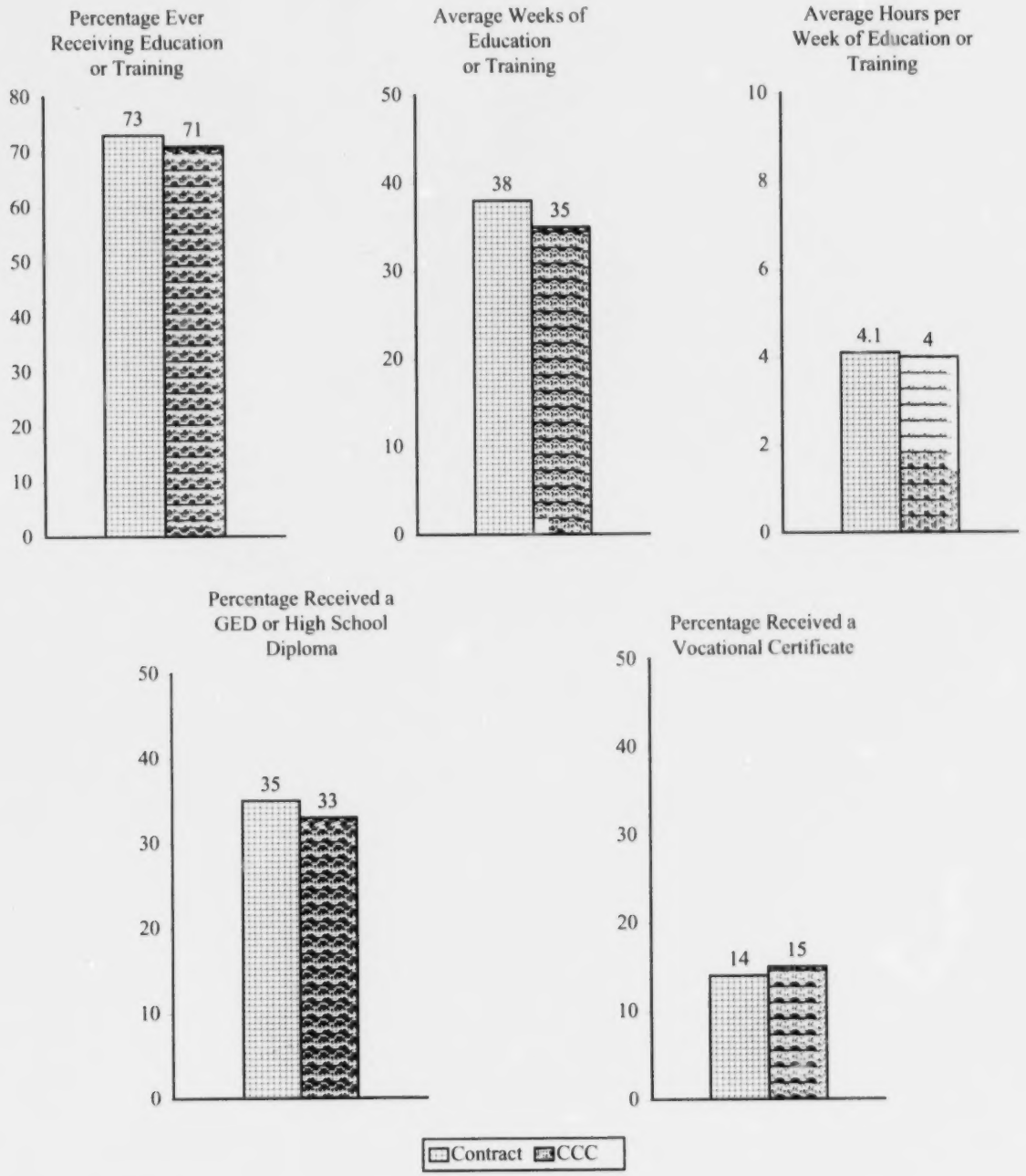


FIGURE II.2

EARNINGS AND ARRESTS OF THE CONTROL GROUP, BY TYPE OF CENTER

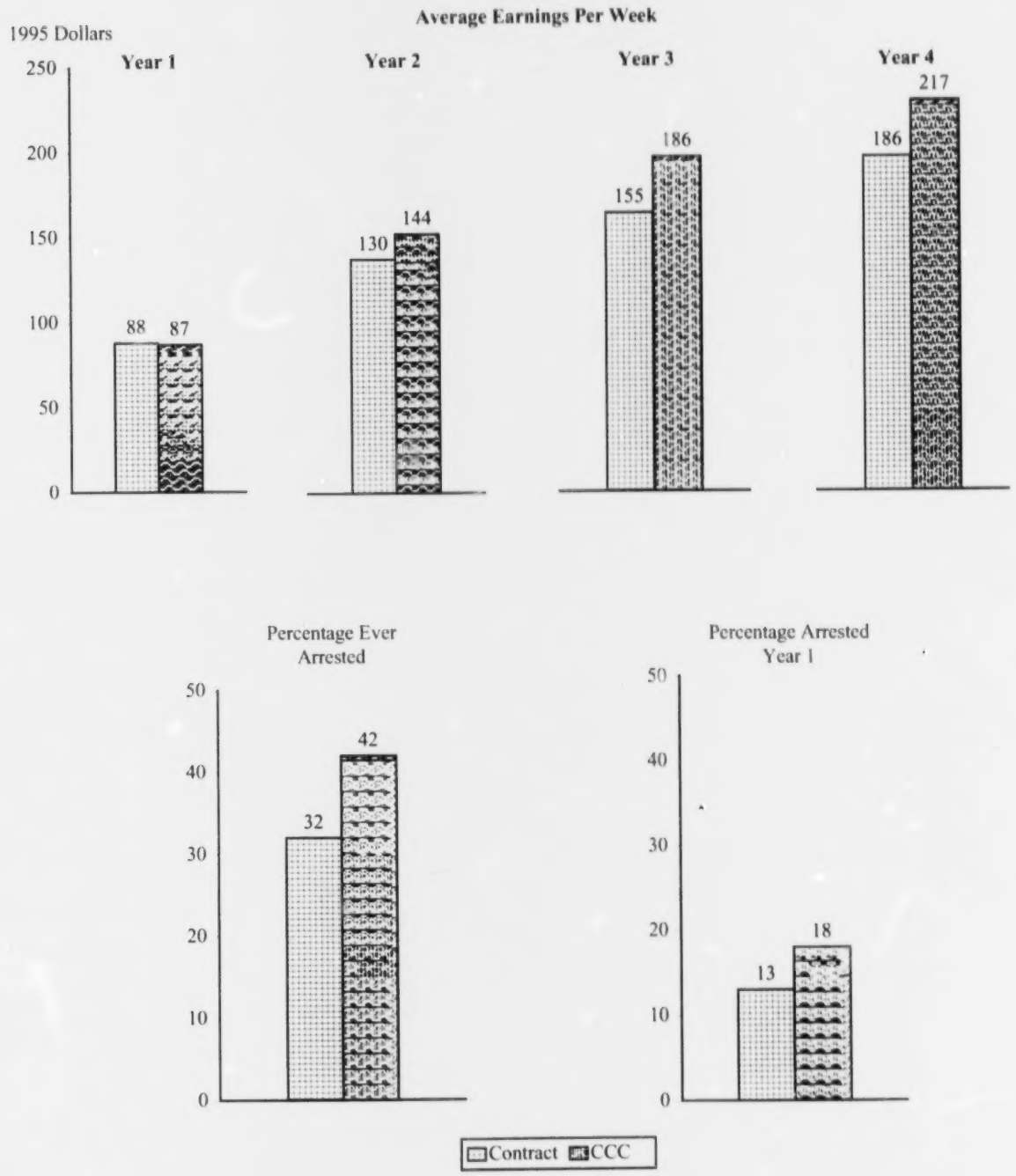
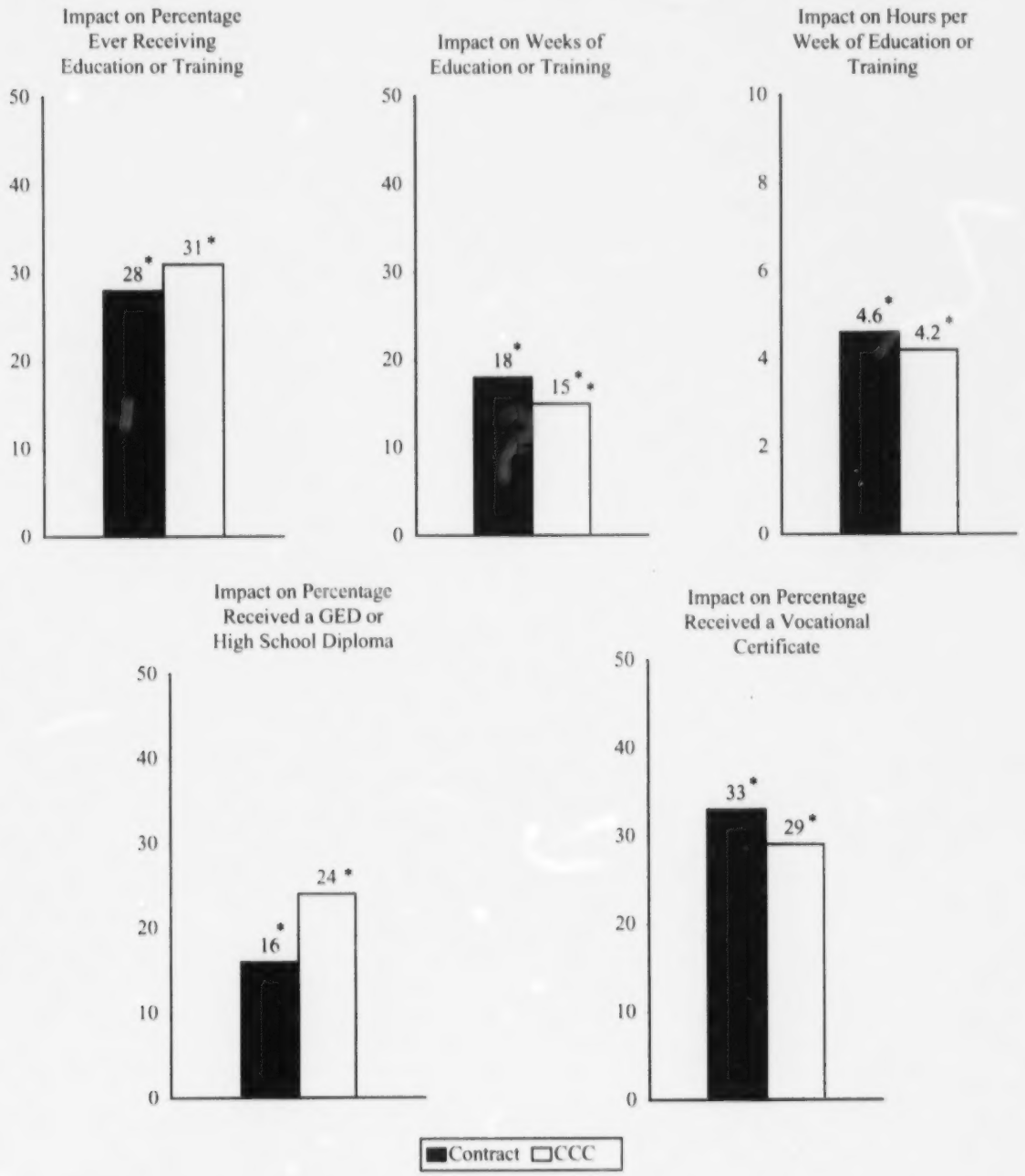


FIGURE II.3

IMPACTS PER PARTICIPANT ON EDUCATION AND TRAINING ACTIVITIES AND EDUCATIONAL ATTAINMENT, BY TYPE OF CENTER



*Estimated impact per participant is statistically significant at the 5 percent level.

percent, versus 16 percent), although a higher percentage of contract centers than CCCs are accredited to offer a high school diploma (22 percent, versus 17 percent, Table II.1).

Impacts per participant on weekly earnings in years 3 and 4 after random assignment were similar--$23 for both CCC and contract center participants in year 3, and $26 for contract center and $18 for CCC participants in year 4 (Figure II.4). However, due to smaller CCC samples, only the impacts for contract centers are statistically significant. Finally, impacts on arrests (both during the full 4-year follow-up period and during the first year following random assignment) were similar for both contract center and CCC participants. None of the differences between impacts for contract centers and CCCs was statistically significant.

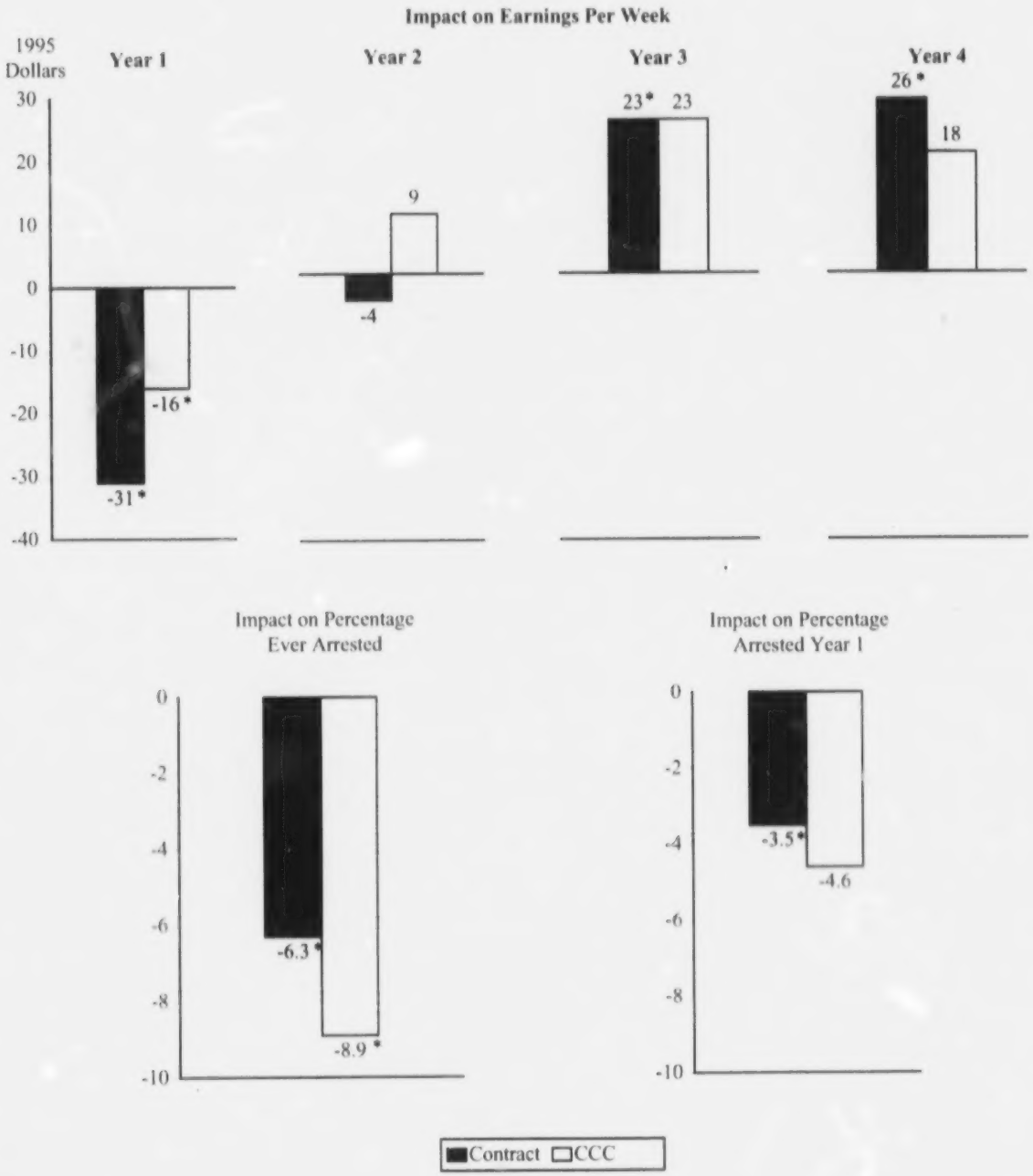
Our findings indicate that both types of centers produce beneficial outcomes for the youths who attend them. An important caveat is that our analysis does not indicate how students assigned to contract centers would fare at CCCs or how students assigned to CCCs would fare at contract centers.

B. CENTER SIZE

Job Corps centers range from about 200 to 2,600 slots. To analyze the relationship between center size and impacts, we defined three size categories. Table II.3 shows data on center characteristics by size. As the table shows, 38 small centers (225 slots or less) serve 20 percent of students, 49 medium centers (226 to 495 slots) serve 45 percent of students, and 16 large centers (496 slots or more) serve the remaining 35 percent of students. Two-thirds of small centers are CCCs, and all of the large centers are contract centers. Centers in the various size categories show broadly similar distributions of other center characteristics. Relatively high proportions of small centers are located in Regions 6, 7/8, and 10, and relatively high proportions of small centers are in

FIGURE II.4

IMPACTS PER PARTICIPANT ON EARNINGS AND ARRESTS, BY TYPE OF CENTER



*Estimated impact per participant is statistically significant at the 5 percent level.

TABLE II.3

CENTER CHARACTERISTICS, BY CENTER SIZE
(Percentage of Centers in Each Center Size Category)

	Small (225 Slots or Less)	Medium (226 to 495 Slots)	Large (496 Slots or More)	All Centers
Percentage of Students	20	45	35	100
Center Type				
Contract	31.6	91.8	100.0	71.0
CCC	68.4	8.2	0.0	29.0
Location				
Inner city	7.9	22.5	18.8	16.5
Urban	13.2	32.7	37.5	26.2
Suburban	29.0	34.7	37.5	33.0
Rural	50.0	10.2	6.3	24.3
Region				
1	0.0	6.1	6.3	3.9
2	5.3	10.2	6.3	7.8
3	10.5	12.2	12.5	11.7
4	21.1	22.5	18.8	21.4
5	7.9	14.3	0.0	9.7
6	18.4	10.2	18.8	14.6
7/8	23.9	6.1	12.5	13.6
9	0.0	10.2	18.8	7.8
10	13.2	8.2	6.3	9.7
Performance Ranking				
High	21.1	12.2	18.8	16.5
Medium	60.5	71.4	62.5	66.0
Low	18.4	16.3	18.8	17.5
Offers High School Diploma	18.4	18.4	31.3	20.4
Trades Offered				
Business	84.2	95.9	100.0	92.2
Mechanical	34.2	34.7	56.3	37.9
Service	21.1	67.4	87.5	53.4
Building and maintenance	76.3	89.8	93.8	85.4
Construction	81.6	85.7	81.3	83.5
Carpentry	86.8	75.5	87.5	81.6
Masonry	68.4	61.2	75.0	66.0
Welding	65.8	44.9	62.5	55.3
Health	44.7	91.8	100.0	75.7
Food service	84.2	85.7	100.0	87.4
Other	21.1	46.9	81.3	42.7
Number of Centers	**38**	**49**	**16**	**103**

SOURCE: SPAMIS, On Board Strength Report, PY 1995; National Job Corps Study Center Mail Survey.

suburban and rural locations. The data on percentages offering trades by size category show, as one would expect, that larger centers tend to offer more trades.

The characteristics of students are similar in the medium and large centers but differ in small centers (Table II.4). Higher percentages of students in small centers are male and very young; a higher percentage have not completed 12th grade; a higher percentage are white and a smaller percentage black, non-Hispanic or Hispanic; and a higher percentage come from a small hometown. Higher than average percentages of students in Regions 6, 7/8 and 10 attend small centers. Because CCCs comprise nearly two-thirds of the small centers, many of the differences between small centers and others are similar to the differences between CCCs and contract centers.

Comparing the experiences of the control group during the follow-up period across the size categories shows small differences in participation in education and training activities (Figure II.5). Just over 70 percent of the control group assigned to each center size category participated in education or training. They did so for just under 40 weeks and for approximately 4 hours per week. Differences across the center groups in educational outcomes are also small. About one-third earned a GED or a high school diploma, and approximately 15 percent received a vocational certificate. The level and growth of earnings exhibit similar patterns (Figure II.6). The largest difference across the center size groups is in the percentage of the control group who were arrested. The percentage arrested during the 4-year follow-up period and the percentage arrested during the first year after random assignment both increase as the center size category declines.

Impacts on receipt of education and training were large for each center size category, but were somewhat larger for the larger centers than the smaller ones (Figure II.7). While the impacts on the percentage who received any education or training were similar by center size, impacts on weeks and

TABLE II.4

CHARACTERISTICS OF ELIGIBLE JOB CORPS APPLICANTS ASSIGNED TO A TYPICAL CENTER IN EACH SIZE CATEGORY
(Percentage of Students Assigned to a Typical Center of Each Type)

	Small (225 Slots or Less)	Medium (226 to 495 Slots)	Large (496 Slots or More)	All Centers
Percentage Female	29.8	42.7	47.0	38.7
Percentage 16 to 17 Years Old	49.3	42.7	34.4	43.8
Percentage Who Had Not Completed 12th Grade	83.6	79.7	73.5	80.1
Percentage Black, Non-Hispanic	32.3	49.2	49.0	43.1
Percentage White, Non-Hispanic	43.9	27.7	21.6	32.6
Percentage Hispanic	12.8	16.3	21.8	15.9
Percentage American Indian, Asian or Pacific Islander, or Other	11.0	6.7	7.7	8.3
Percentage Ever Arrested or Charged with Delinquency	32.4	26.7	22.9	28.2
Size of Hometown Population				
10,000 or less	33.2	19.0	14.9	23.4
10,000 to 50,000	24.1	20.0	16.6	21.0
50,000 to 250,000	18.3	19.0	19.0	18.7
More than 250,000	24.4	42.0	49.4	36.8
Job Corps Region				
1	0.0	6.0	8.2	3.8
2	5.3	10.2	9.4	8.0
3	10.0	12.1	15.6	11.3
4	21.4	25.8	7.8	23.2
5	10.4	13.5	0.5	9.6
6	17.0	9.5	17.4	14.0
7/8	21.3	5.6	6.7	12.3
9	1.3	9.6	26.0	8.2
10	13.3	7.7	8.5	9.6

SOURCE: Baseline interview data.

NOTE: Figures are means of the percentage of students assigned to centers in each center category who possess the indicated attribute. We computed the percentage with a given attribute in each center and then computed the average of the means across centers in a category.

FIGURE II.5

EDUCATION AND TRAINING ACTIVITIES AND EDUCATIONAL ATTAINMENT OF THE CONTROL GROUP, BY CENTER SIZE

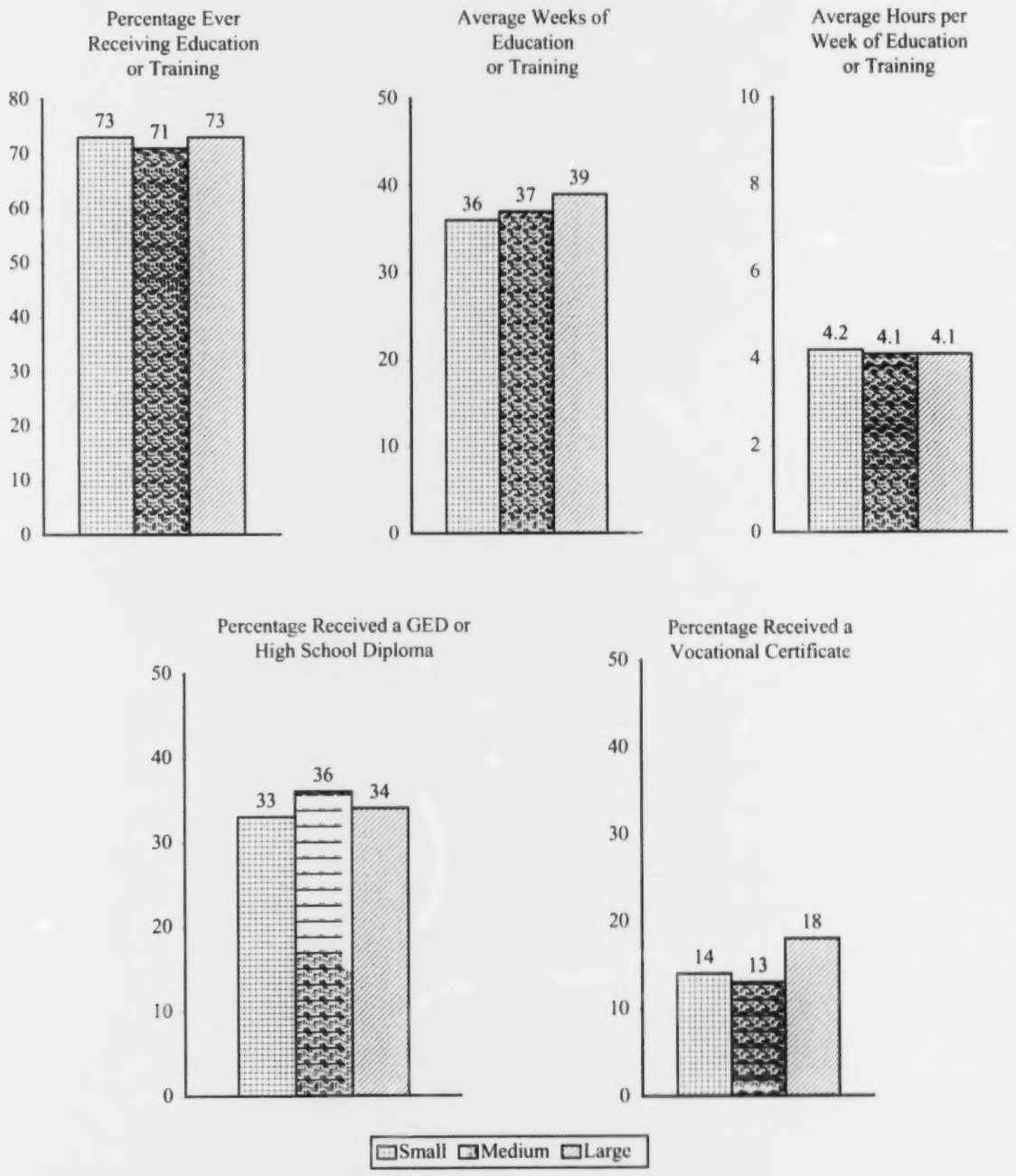


FIGURE II.6

EARNINGS AND ARRESTS OF THE CONTROL GROUP, BY CENTER SIZE

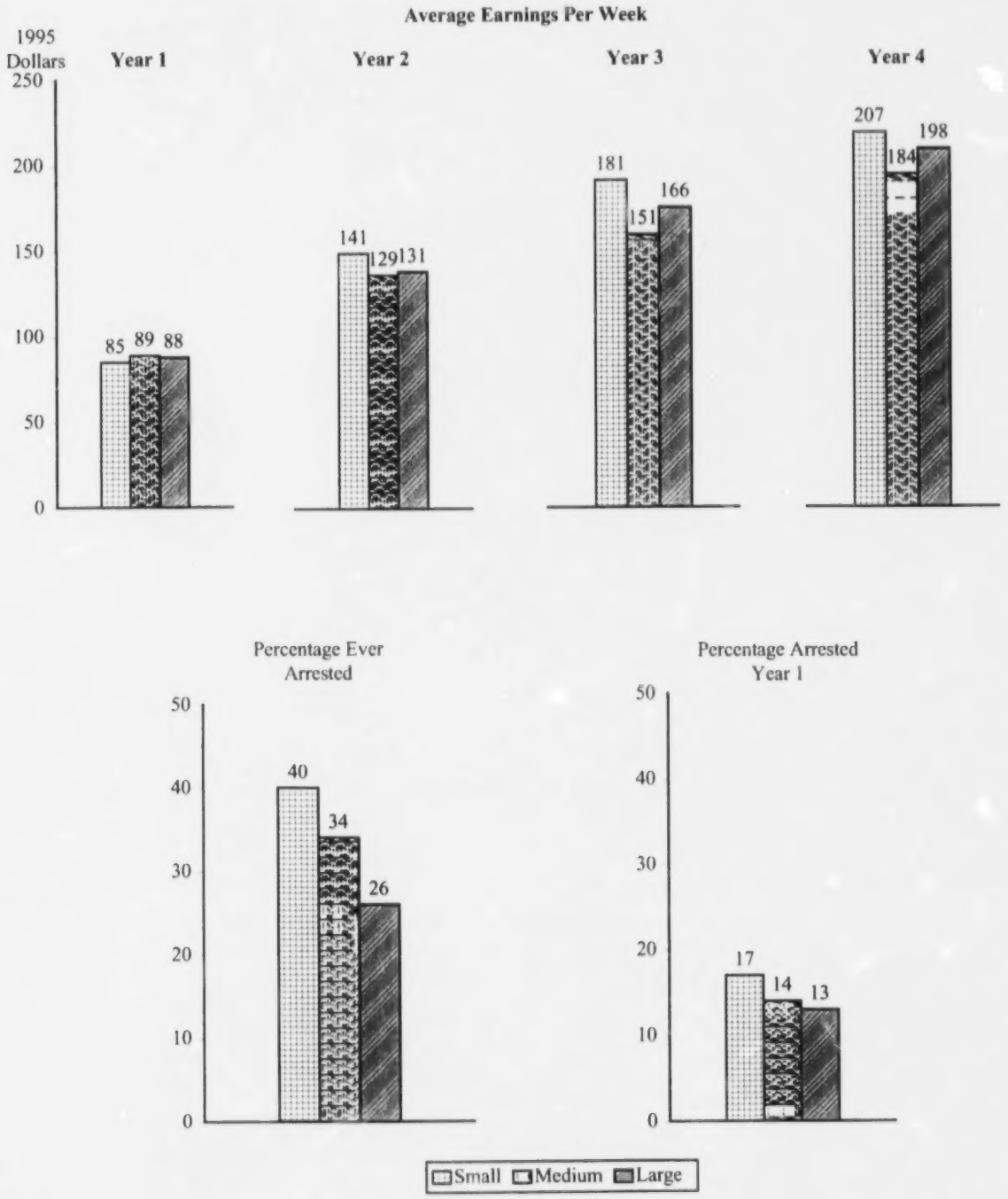
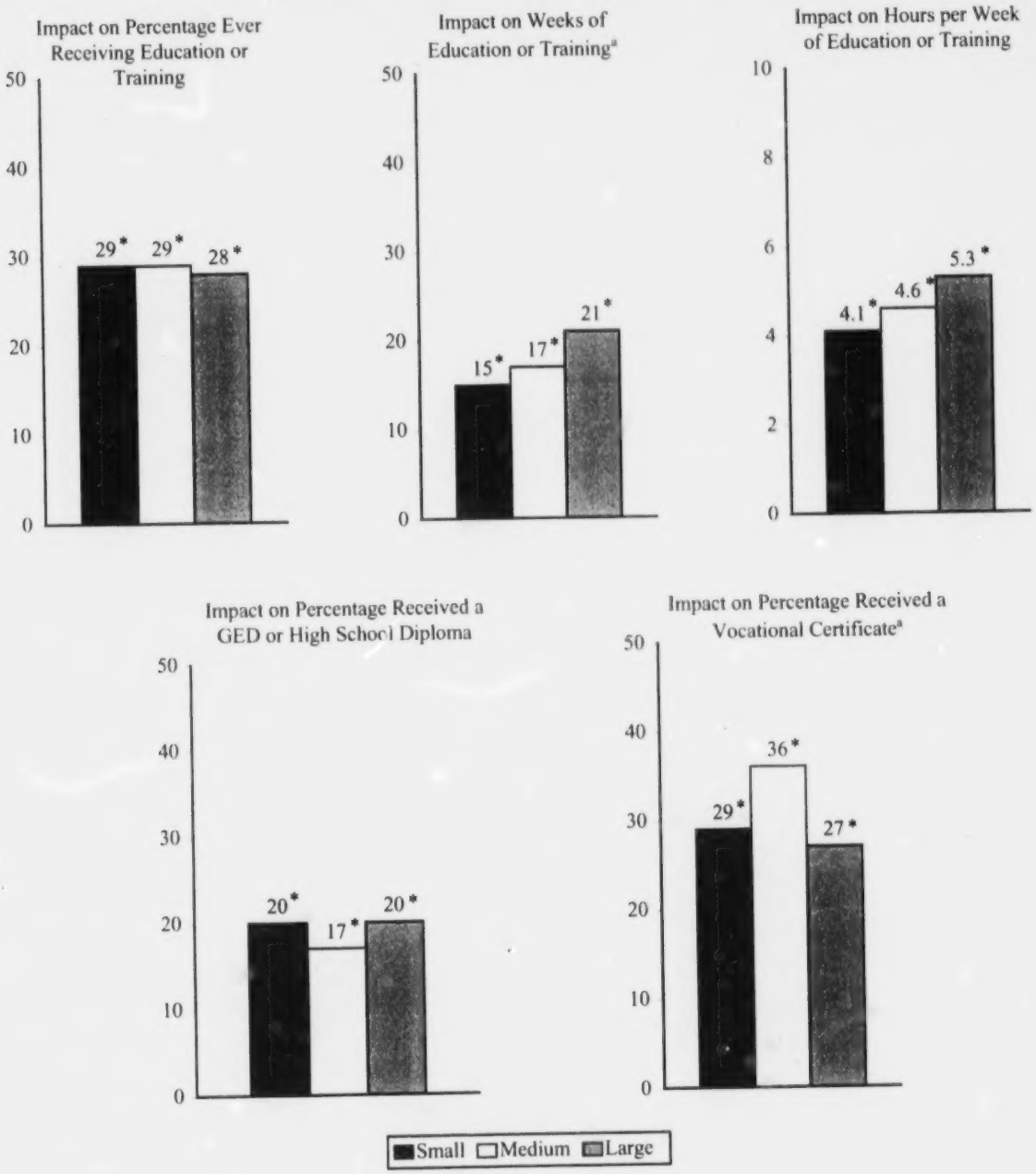


FIGURE II.7

IMPACTS PER PARTICIPANT ON EDUCATION AND TRAINING ACTIVITIES AND EDUCATIONAL ATTAINMENT, BY CENTER SIZE



*Estimated impact per participant is statistically significant at the 5 percent level.

[a]Difference in impacts across operator types are significantly different from zero at the .10 level, two-tailed test.

hours increased with center size. Moreover, the difference in impacts on hours of training were statistically significant. The impact of 5.3 hours per week in large centers was approximately 1,100 hours over 4 years. The impact of 4.6 hours per week in medium centers was approximately 950 hours. The impact of 4.1 hours in small centers was about 850 hours. Thus, the impact on training hours per participant was larger as the center size category increased.

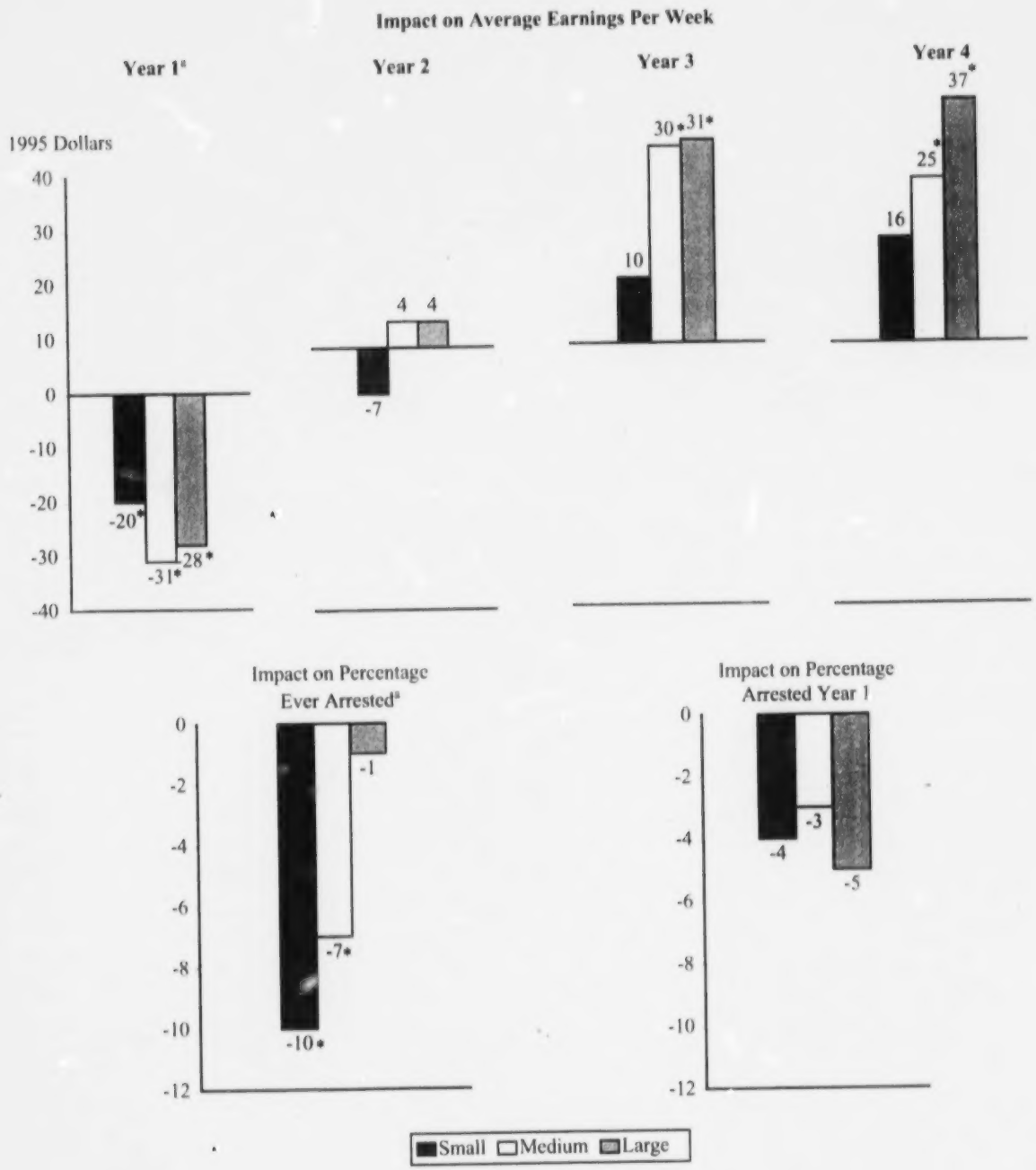
Impacts on educational attainment were similar by center size. The impact on receipt of a high school credential (GED or high school diploma) was 17 percentage points in medium centers and 20 percentage points in small and large ones (all statistically significant). The impact on receipt of a vocational certificate was also large and statistically significant for each center size category.

Estimated impacts on earnings and arrests differ somewhat by center size category, although most of the differences are not statistically significant (Figure II.8). While earnings impacts in years 3 and 4 were positive in all center size groups, the point estimates are considerably smaller for participants assigned to a small center, and these smaller estimates for small centers are not significantly different from zero (although small samples limit the power of this test for the small centers). In contrast, the larger impacts for large and medium centers are statistically significant for both years. Finally, impacts on arrest rates exhibit the opposite pattern: they were larger (and statistically significant) for the small- and medium-sized centers, and smaller (and not statistically significant) for the large centers. Furthermore, the differences across size categories in impacts on the percentage ever arrested are statistically significant.

In summary, impacts on education and training activity, educational attainment, earnings, and arrests were positive for participants assigned to centers in each size group. There is some evidence, however, that impacts on hours of education and earnings were smaller at the small centers than at

FIGURE II.8

IMPACTS PER PARTICIPANT ON EARNINGS AND ARRESTS, BY CENTER SIZE



*Estimated impact per participant is statistically significant at the 5 percent level.

[a]Difference in impacts across operator types are significantly different from zero at the .10 level, two-tailed test.

medium and large ones, while impacts on arrests and receipt of a high school credential were larger at the small centers.[2]

[2]Impacts on all outcomes are similar at small contract centers were CCCs.

III. IMPACTS, BY REGION

Regions are an important unit of analysis for the Job Corps national office and federal policymakers. Regional office staff contract for center operations, outreach and admissions, and placement services; monitor for compliance with program regulations; and provide leadership for center operators. In addition, the population eligible for Job Corps, local labor market conditions, and alternative education and training opportunities may differ across regions. Finally, the size of centers and the allocation of center capacity between Civilian Conservation Centers (CCCs) and contract centers differ across regions.

In this chapter, we compare the characteristics of centers and of students at an average center in each Job Corps region. We also present impacts by region. Note that our analysis of differences among Job Corps regions has much less power than our analyses of other center-level factors considered in this report. This lower power is due to the larger number of regions (nine), compared to the number of groups created for the other characteristics (two or three). The average share of our sample in each region is only 11 to 12 percent, with less than 5 percent in the smallest region and approximately 25 percent in the largest one. This low power greatly limits our ability to interpret the differences in impacts across regions.

A. CHARACTERISTICS OF CENTERS AND STUDENTS

Several regional differences in center characteristics are important (Table III.1). CCCs are concentrated in Regions 4, 7/8, and especially 10, while Regions 1 and 9 have no CCCs. As for center locations, Region 5 stands out for its high percentage of centers in inner-city areas, Region 10 for its large percentage of rural centers. The other regions have centers in both urban and more rural areas. Regions 7/8, 9, and 10 stand out for their high percentages of high- and medium-

TABLE III.1

CENTER CHARACTERISTICS, BY REGION
(Percentage of Centers in Each Region)

	Region									All Centers
	1	2	3	4	5	6	7/8	9	10	
Center Type										
Contract	100.0	75.0	83.3	68.8	80.0	80.0	50.0	100.0	30.0	70.9
CCC	0.0	25.0	16.7	31.8	20.0	20.0	50.0	0.0	70.0	29.1
Size										
Small	0.0	25.0	33.3	36.4	30.0	46.7	64.3	0.0	50.0	36.9
Medium	75.0	62.5	50.0	50.0	70.0	33.3	21.4	62.5	40.0	47.6
Large	25.0	12.5	16.7	4.6	0.0	13.3	7.1	37.5	10.0	11.7
Very large	0.0	0.0	0.0	9.1	0.0	25.0	7.1	0.0	0.0	3.9
Location										
Inner city	0.0	12.5	16.7	4.6	50.0	26.7	7.1	37.5	0.0	16.5
Urban	50.0	37.5	33.3	27.3	20.0	20.0	7.1	62.5	10.0	26.2
Suburban	50.0	37.5	33.3	36.4	10.0	40.0	50.0	0.0	30.0	33.0
Rural	0.0	12.5	16.7	31.8	20.0	13.3	35.7	0.0	60.0	24.3
Performance Ranking										
High	0.0	0.0	8.3	0.0	20.0	20.0	28.6	50.0	30.0	16.5
Medium	100.0	62.5	75.0	68.2	50.0	60.0	71.4	50.0	70.0	66.0
Low	0.0	37.5	16.7	31.8	30.0	20.0	0.0	0.0	0.0	17.5
Offers High School Diploma	0.0	25.0	25.0	4.6	0.0	13.3	71.4	12.5	20.0	20.4
Trades Offered										
Business	100.0	100.0	91.7	86.4	100.0	80.0	100.0	100.0	90.0	92.2
Mechanical	50.0	50.0	25.0	50.0	30.0	20.0	35.7	62.5	30.0	37.9
Service	50.0	75.0	50.0	63.6	60.0	53.3	35.7	87.5	10.0	53.4
Building and maintenance	75.0	75.0	91.7	86.4	100.0	80.0	92.9	100.0	60.0	85.4
Construction	50.0	62.5	66.7	90.9	80.0	86.7	92.9	87.5	100.0	83.5
Carpentry	50.0	50.0	91.7	95.5	60.0	73.3	100.0	75.0	90.0	81.6
Masonry	50.0	50.0	66.7	90.9	40.0	40.0	85.7	62.5	70.0	66.0
Welding	75.0	12.5	16.7	68.2	50.0	60.0	78.6	50.0	70.0	55.3
Health	100.0	87.5	91.7	68.2	70.0	80.0	71.4	75.0	60.0	75.7
Food service	100.0	87.5	75.0	86.4	80.0	86.7	100.0	75.0	100.0	87.4
Other	75.0	12.5	66.7	40.9	20.0	26.7	21.4	87.5	70.0	42.7
Number of Centers	**4**	**8**	**12**	**22**	**10**	**15**	**14**	**8**	**10**	**103**

SOURCE: SPAMIS, On Board Strength Report, PY 1995; National Job Corps Study Center Mail Survey.

NOTE: Contiguous states included in each region are as follows: Region 1: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; Region 2: New Jersey, New York; Region 3: Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia; Region 4: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee; Region 5: Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin; Region 6: Arkansas, Louisiana, New Mexico, Oklahoma, Texas; Region 7/8: Colorado, Iowa, Kansas, Missouri, Montana, Nebraska, North Dakota, South Dakota, Utah, Wyoming; Region 9: Arizona, California, Nevada; Region 10: Idaho, Oregon, Washington.

performing centers. Although the percentage of centers offering the various groups of trades differs across regions, no patterns are evident.

The regions fall into three broad groups in terms of the average center's percentages who are female, ages 16 to 17, and high school dropouts (Table III.2). First, Regions 1, 2, 3, 5, and 6 have percentages broadly similar to the national center average in the following categories: female, in the youngest age group, and high school dropouts. In each of these four regions, about 40 percent of students are female, 38 to 44 percent are ages 16 to 17, and about 80 percent are high school dropouts (except in Region 1, where the average percentage who are dropouts is only 71 percent). Second, Regions 4, 7/8, and 10 have much smaller percentages female, much larger percentages ages 16 to 17, and much larger percentages who are high school dropouts (except Region 10). The smaller percentage who are female in each of these regions is likely due to the concentration of both CCCs and large centers in the three regions. Third, Region 9 stands out because the average percentage of females is exceptionally high (over 50 percent), the average fraction of students who are ages 16 to 17 is low (under one-third), and the average percentage who are high school dropouts is low (under 70 percent, compared to 80 percent in most other regions nationwide).

Differences in the ethnic composition of students at a typical center in each region reflect differences in the ethnic composition of low-income youths across the regions. White, non-Hispanic students make up 50 percent or more of the students at a typical center in Region 1 (New England), Region 7/8 (Mountain States and Midwest), and Region 10 (Pacific Northwest). Black, non-Hispanic students are the majority group at centers in Region 2 (New Jersey, New York), Region 3 (Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia), Region 4 (Southeast), and Region 5 (Upper Midwest/Great Lakes). No ethnic group comprises a majority in Region 6 (Southwest) or Region 9 (West). However, Hispanic students and a single group

TABLE III.2

CHARACTERISTICS OF ELIGIBLE JOB CORPS APPLICANTS AT CENTERS IN EACH REGION
(Average Student Characteristics of Centers in Each Region)

	Region									
	1	2	3	4	5	6	7/8	9	10	All Centers
Percentage Female	43.5	44.8	43.1	33.4	43.2	40.4	33.2	51.0	30.1	38.7
Percentage 16 to 17 Years Old	38.3	40.0	44.4	47.4	42.7	41.9	48.5	30.5	48.1	43.8
Percentage Who Had Not Completed 12th Grade	71.3	78.3	79.3	85.7	80.8	80.9	81.7	67.9	79.0	80.1
Percentage Black, Non-Hispanic	20.4	51.0	64.0	66.3	62.1	38.1	19.1	19.5	5.8	43.1
Percentage White, Non-Hispanic	51.5	20.4	24.9	24.3	27.0	24.7	49.9	19.9	68.2	32.6
Percentage Hispanic	20.6	25.7	7.8	7.1	7.2	27.9	10.2	42.7	13.9	15.9
Percentage American Indian, Asian or Pacific Islander, or Other	7.5	3.0	2.9	2.4	3.7	9.4	21.0	18.0	12.2	8.3
Percentage Ever Arrested or Charged with Delinquency	25.6	28.4	25.2	27.7	27.8	22.3	38.6	22.3	33.1	28.2
Size of Hometown Population										
10,000 or less	25.2	7.6	18.2	24.4	12.2	27.8	37.3	9.4	35.2	23.4
10,000 to 50,000	20.5	12.1	17.8	30.5	14.1	15.8	22.7	10.4	29.9	21.0
50,000 to 250,000	27.9	28.4	13.8	16.5	17.8	20.5	15.0	22.5	19.4	18.7
More than 250,000	26.4	51.8	50.2	28.7	55.8	35.9	24.9	57.7	14.9	36.8

SOURCE: Baseline interview data.

NOTES: Figures are means of the percentage of students assigned to centers in each region who possess the indicated attribute. We calculated the mean number in each center and then took the average across centers in a category of the means. Contiguous states included in each region are as follows: Region 1: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; Region 2: New Jersey, New York; Region 3: Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia; Region 4: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee; Region 5: Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin; Region 6: Arkansas, Louisiana, New Mexico, Oklahoma, Texas; Region 7/8: Colorado, Iowa, Kansas, Missouri, Montana, Nebraska, North Dakota, South Dakota, Utah, Wyoming; Region 9: Arizona, California, Nevada; Region 10: Idaho, Oregon, Washington.

composed of American Indians, Asians or Pacific Islanders, and other groups make up a relatively high percentage in both the Southwest and West. In Region 6, no single ethnic group is more than about one-third of the student body--black, non-Hispanic is the largest, at 38 percent. In Region 9, Hispanic students (at 43 percent), plus American Indians, Asians or Pacific Islanders, and other groups (at 18 percent) together make up nearly two-thirds of the students at a typical center.

The percentage of students who had been arrested or charged with delinquency before applying to Job Corps varied, from a low of 22 percent in Regions 9 and 6, to a high of 39 percent in Region 7/8 and 33 percent in Region 10. Again, however, most regions were close to the national average.

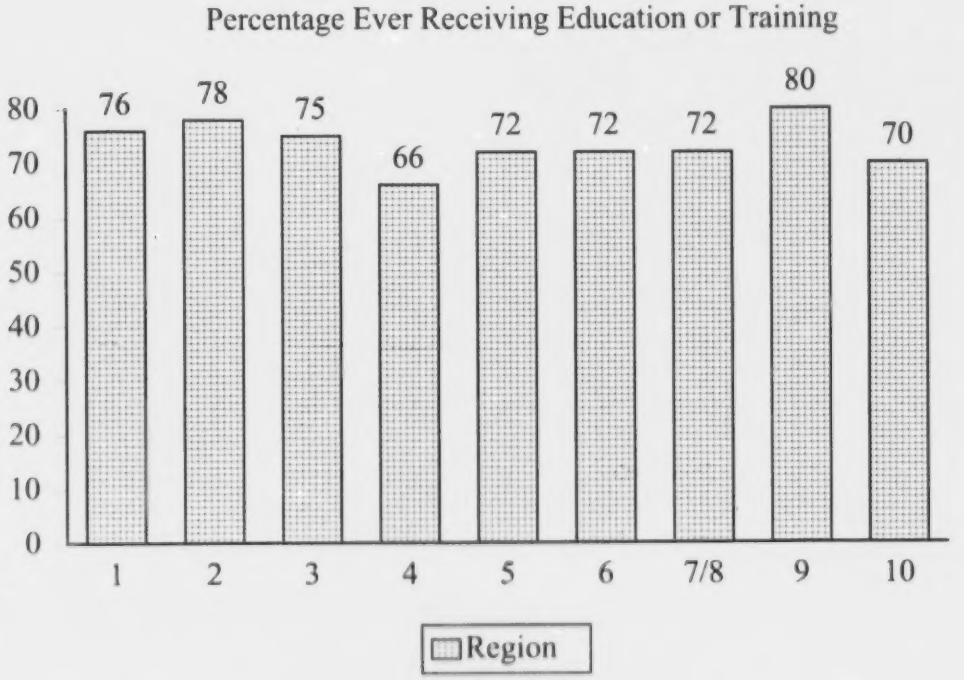
Finally, the distribution of the size of students' hometowns follows the pattern one would expect. Large percentages of students (one-fourth to one-third) in Region 1, Region 6, Region 7/8, and Region 10 are from small towns (population 10,000 or less). In Regions 2, 3, 5, and 9, more than half of students at a typical center are from large cities (population 250,000 or more).

As one might expect, the experiences of control group members during the period following random assignment were diverse across the country. The percentage who ever participated in education or training ranged from a low of 66 percent in Region 4 to a high of 80 percent in Region 9 (Figure III.1). Similarly, average hours per week spent in education or training ranged from 3.3 in Region 4 to 4.8 in Regions 3 and 9, corresponding to a range of total hours of education and training over 4 years of from 700 to 1,000 hours.

Educational attainment measures show a similar range of variation (Figure III.2). The percentage of control group members with no high school credential who attained a GED or high school diploma was 27 percent in Region 6 and 44 percent in Region 1.

FIGURE III.1

EDUCATION AND TRAINING ACTIVITIES OF THE CONTROL GROUP, BY REGION



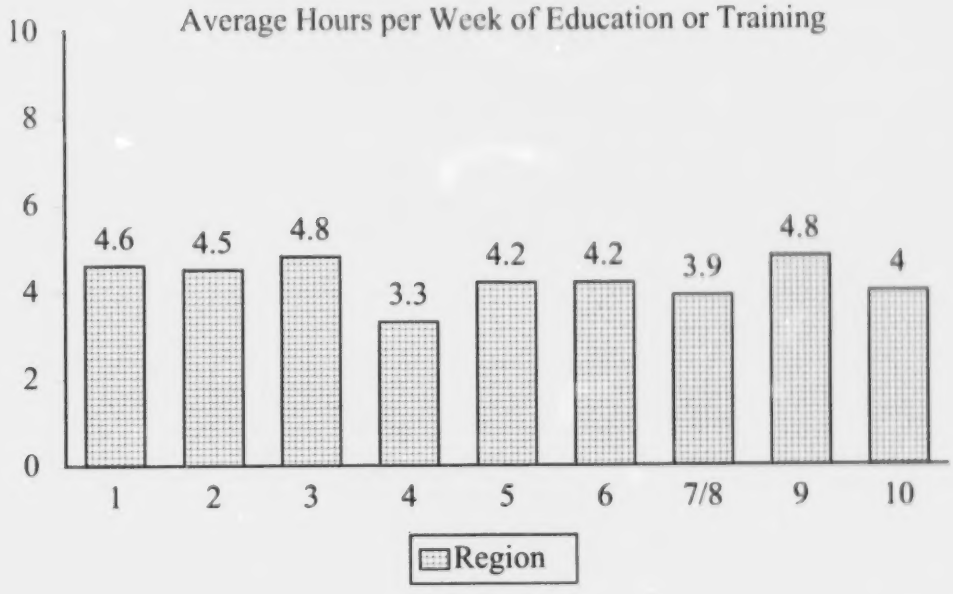
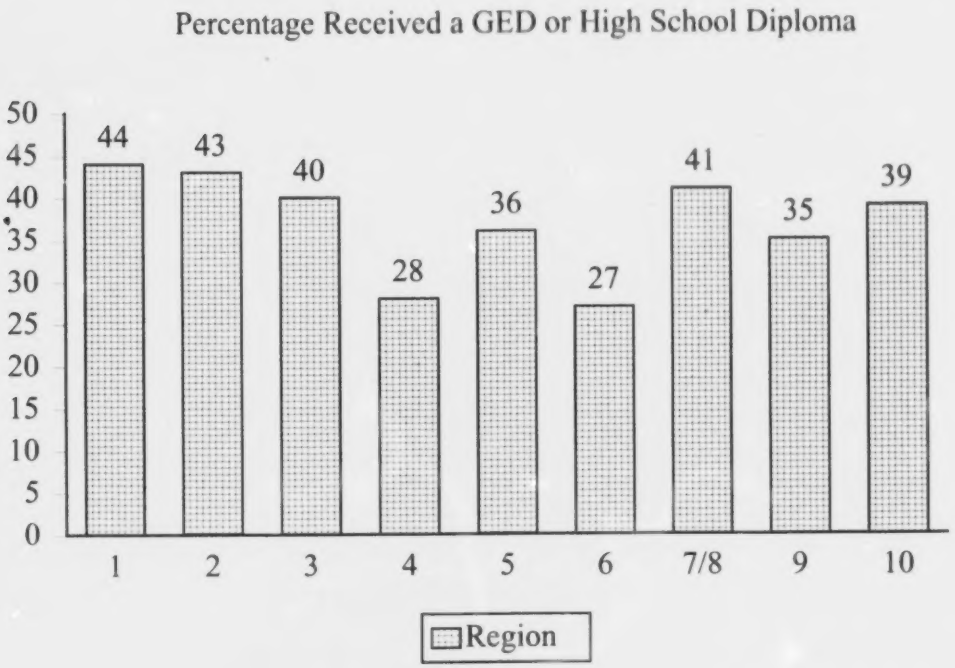
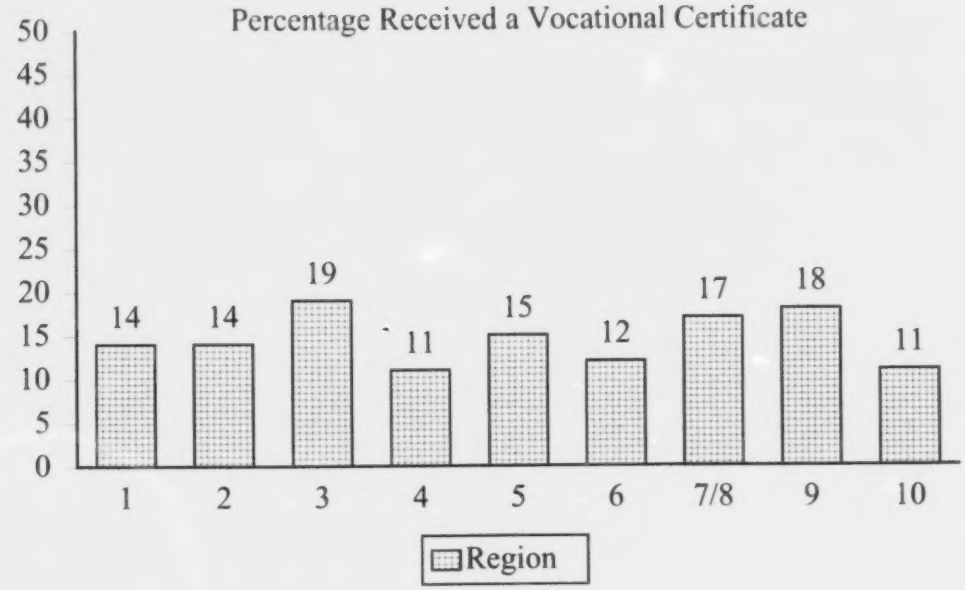


FIGURE III.2

EDUCATIONAL ATTAINMENT OF THE CONTROL GROUP, BY REGION





Among the control group, average weekly earnings in year 4 varied from $179 per week in Region 4 to $218 per week in Region 9. The percentage ever arrested ranged from 18 percent in Region 9 to 43 percent in Region 7/8 (Figure III.3).

B. IMPACTS

Impacts on participation in education and training and on acquiring a high school credential or vocational certificate were uniformly positive (Figure III.4).[1] However, the size of the impacts varied for each of the measures. The differences in the impacts on whether the student was ever in education and training and on attainment of a vocational certificate (Figure III.4) are statistically significant.[2] However, except for the fact that Regions 5 and 10 stand out as having among the largest impacts on each of the education-related measures, the patterns of education impacts do not exhibit systematic differences by region.

Impacts on average weekly earnings by region also indicate that the positive effects of Job Corps are spread throughout the system and not limited to a few regions of the country (Figure III.5). In year 3, the estimates of impacts were positive in 7 of 9 regions (and statistically significant in 4 of the 7). In year 4, the estimates were positive in 8 of 9 regions (and statistically significant in 2 of the 8). To be sure, the impacts varied greatly by region and by year. For example, in year 3, the estimated impacts ranged from -$17 per participant in Region 3 to $60 per participant in Region 10, and those in year 4 ranged from -$5 to $48. Between year 3 and year 4, the estimated impact increased in 4 regions and decreased in 4. Overall, these patterns suggest that the relatively small

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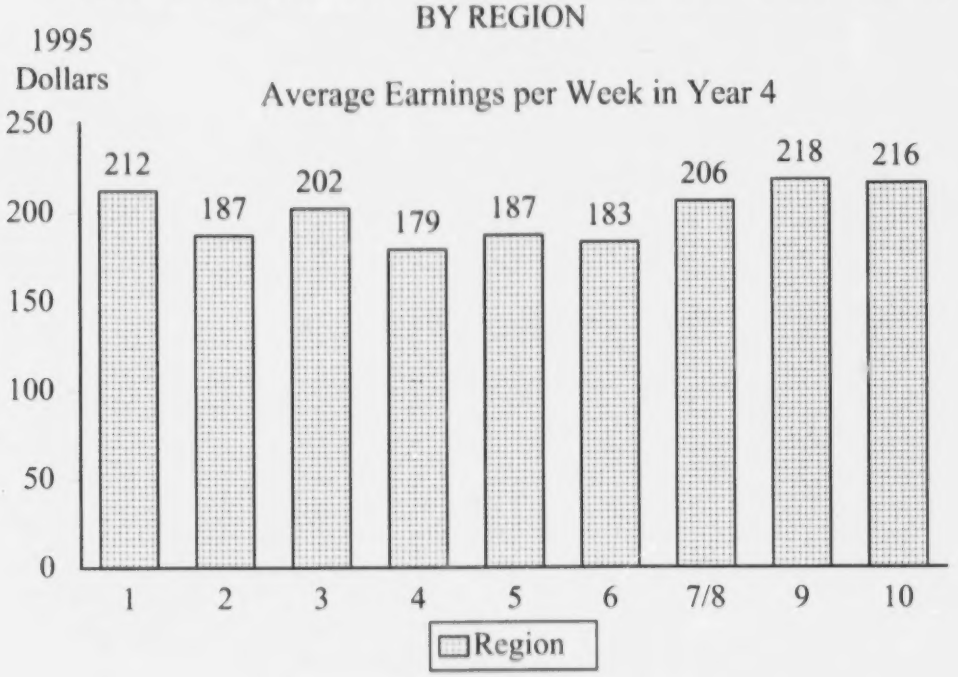
[1]Appendix A shows data for the full set of education services and outcomes, earnings, and arrests. This section focuses on a limited set of outcomes.

[2]The differences in impacts for hours per week in education are also statistically significant (see Table A.5).

FIGURE III.3

YEAR 4 EARNINGS AND ARRESTS OF THE CONTROL GROUP, BY REGION



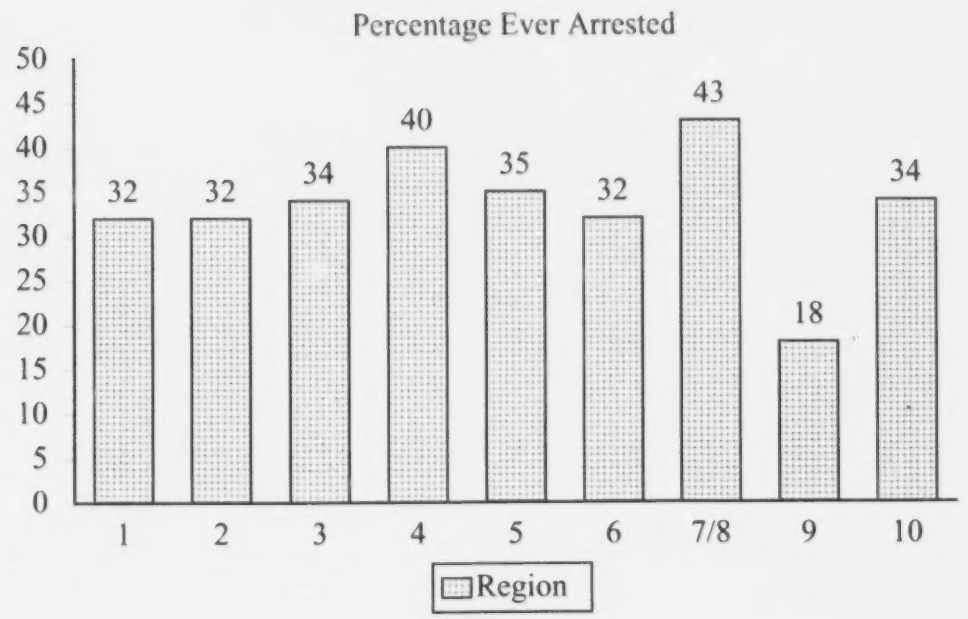
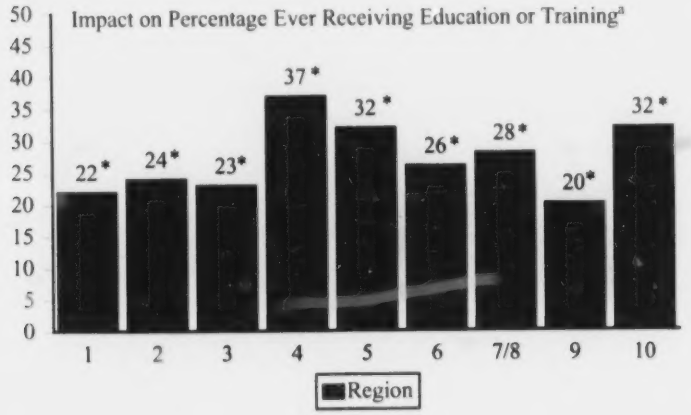
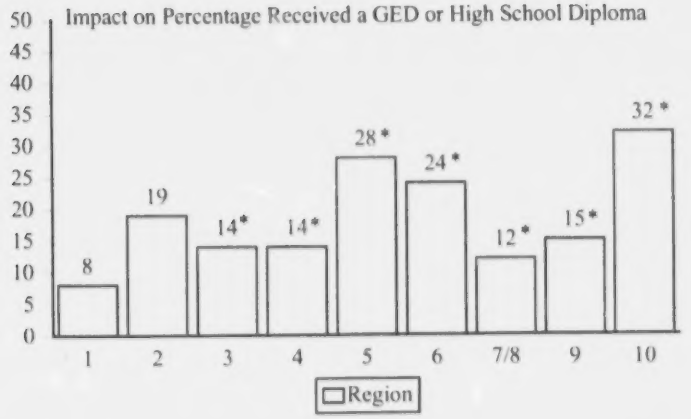
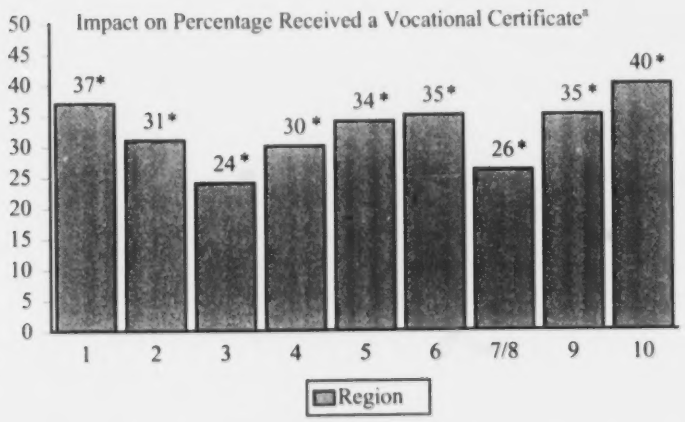


FIGURE III.4

IMPACTS ON EDUCATION AND TRAINING SERVICES AND EDUCATIONAL ATTAINMENT, BY REGION





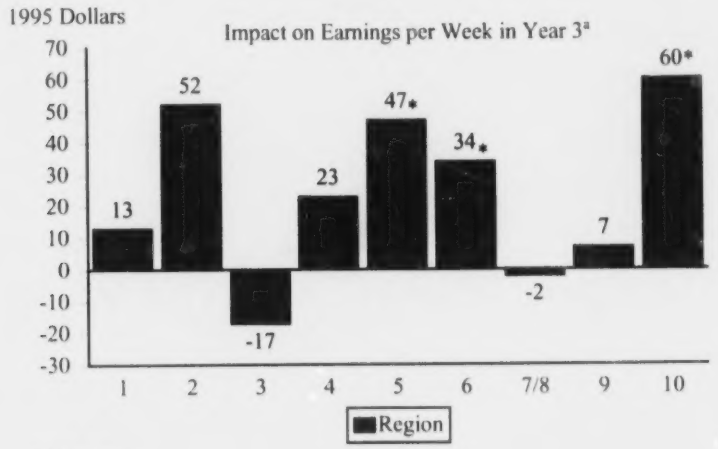


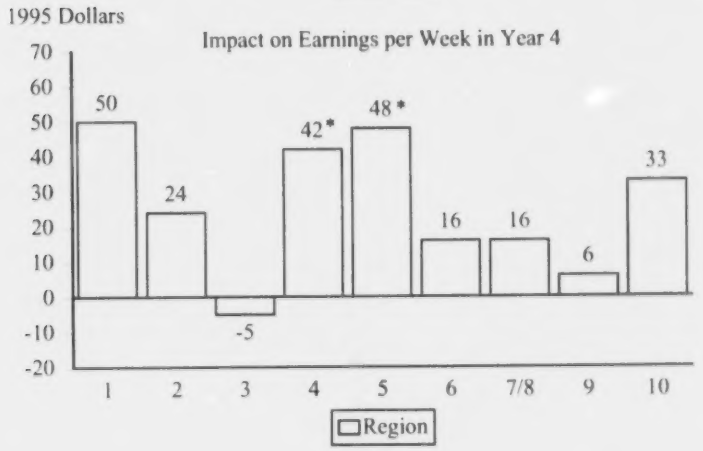
*Estimated impact per participant is statistically significant at the 5 percent level.

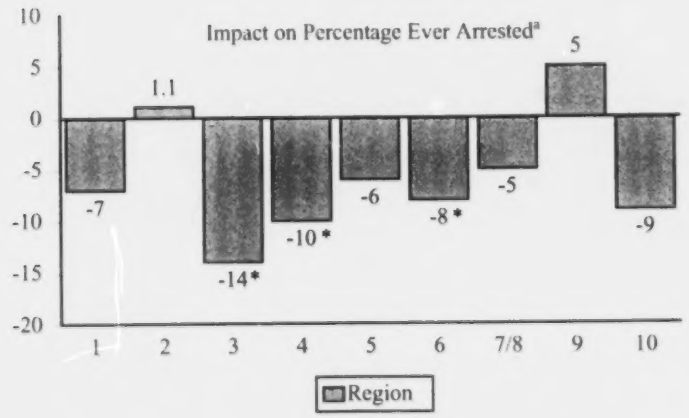
[a]Difference in impacts across operator types are significantly different from zero at the .10 level, two-tailed test.

FIGURE III.5

IMPACTS ON EARNINGS AND ARRESTS PER PARTICIPANT, BY REGION







*Estimated impact per participant is statistically significant at the 5 percent level.

[a]Difference in impacts across operator types are significantly different from zero at the .10 level, two-tailed test.

sample per region led to considerable variability in the estimates by region. Because of this variability, we believe that comparisons between particular regions is not informative.

Finally, Job Corps participation had beneficial impacts on the likelihood of arrest throughout the country (Figure III.5). The percentage ever arrested over the 4-year follow-up period was reduced in 7 of 9 regions, with the reductions ranging from 5 to 15 percentage points. The beneficial impacts were largest during the first year after random assignment, when most participants were attending Job Corps (Appendix Table A.6).

IV. IMPACTS, BY LEVEL OF CENTER PERFORMANCE

The Job Corps performance measurement system aims to ensure that staff throughout Job Corps focus on helping students achieve key objectives while they are enrolled in the program and positive outcomes after they leave it. Center performance has been measured and tracked since the early 1980s. Since then, the system has evolved continuously in response to changes in both the program itself and the specific programmatic objectives of managers. Indeed, the system currently in place differs in important ways from the one that was used in Program Years (PYs) 1994, 1995, and 1996, when most of the students whose experience is represented in the National Job Corps Study were enrolled in Job Corps.

At the time our program group members were enrolled, the Job Corps performance measurement system rewarded centers for improvements in students' skills, as demonstrated through vocational completion, GED attainment, or, if attaining a GED was deemed unrealistic, improvements in basic reading and math skills. The system also rewarded centers whose students obtained full-time jobs or enrolled in full-time education after Job Corps, obtained jobs that paid good wages, and obtained jobs that matched the occupational area in which the student received training. Finally, the system rewarded centers for adhering to Job Corps requirements and for providing high-quality services, as determined through periodic reviews of center operations conducted by regional office monitors.

The "National Job Corps Study Report on the Process Analysis" (Johnson et al. 1999) found that the performance measurement system exerts several specific effects on day-to-day center operations. First, staff generally are aware of standards and know how the performance of their center ranks against that of other centers. About two-thirds of contract center directors said they provide

performance reports to their management staff weekly, and the rest provide them monthly. About one-third of Civilian Conservation Center (CCC) directors said they provide performance reports to staff weekly, and two-thirds provide them monthly. Second, many center operators tie financial rewards of their staff to the center's measured performance. Such incentives are more common at contract centers than at CCCs. They are usually (though not always) offered to the center director.

In addition, most centers reported that they use performance measurement data to make management decisions. About one-third also reported that they use such data in making their weekly or monthly decisions regarding whether to retain or terminate individual students. For example, a student who had completed vocational training and was close to completing the GED might be encouraged to remain in the program and obtain the GED. In contrast, a student who had completed vocational training but was not close to passing the GED test (or already had a high school diploma at enrollment) might be encouraged to leave.

This focus on performance at the staff level is a goal of the Job Corps performance measurement system. Tying the award of new contracts and the award of option years under existing contracts to measured center performance has provided strong financial incentives for center staff, especially contract center staff, to focus on measured performance. A natural question is whether the level of center performance is related to the size of impacts on key outcomes.

A. DESIGN OF THE PERFORMANCE MEASUREMENT SYSTEM AND THE PERFORMANCE-LEVEL GROUPINGS USED IN THE ANALYSIS

To describe the design of the Job Corps performance measurement system and define performance groupings for the analysis of impacts, we focus on the systems used in PY 1994 (July 1994 to June 1995), PY 1995 (July 1995 to June 1996), and PY 1996 (July 1996 to June 1997). The study sample included applicants who applied between November 1994 and December 1995 and

were found eligible by February 1996. About 73 percent of program group members entered Job Corps, and 94 percent of weeks that they were enrolled in Job Corps fell within PY 1994, PY 1995, and PY 1996. Accordingly, our definition of performance groupings for the analysis of impacts focuses on the systems in place during PY 1994 to PY 1996.

The Job Corps performance measurement system comprises three elements: measures, standards, and weights. Measures are the specific student outcomes that program managers want center staff to affect. During PY 1994, the system included eight measures in three areas: (1) *program achievement* measures included reading gains, math gains, GED attainment rate, and vocational completion rate; (2) *placement* measures included the placement rate, the average wage at placement, and the percentage of quality placements (defined as the percentage of placements in jobs that matched the area of training); and (3) *quality/compliance* measures included one measure developed from observations that regional office monitors made during program reviews of the centers.

Table IV.1 lists the measures, describes the pool of students whose outcomes are counted for each measure, and presents the definition of each measure. As the table indicates, the measure "percentage of placements that were full-time" was added to the placement part of the performance measure in PY 1995. In addition, the pools of students used for calculating the "vocational completion" rate and the "job-training match" rate were broadened in PY 1995 to make centers accountable for broader groups of students.

Standards are the specific levels of each measure that a center is expected to achieve. For most measures, the national office sets a uniform standard that applies to all centers nationwide. Table IV.1 shows the standard for reading gains in PY 1994 to be 30 percent. That is, 30 percent of

TABLE IV.1

JOB CORPS CENTER PERFORMANCE MEASUREMENT SYSTEM FOR PROGRAM YEARS 1994, 1995, AND 1996

	Program Year 1994				Program Year 1995				Program Year 1996			
Area/Measure	Pool[a]	Measure	Standard[b]	Weight[c]	Pool[a]	Measure	Standard[b]	Weight[c]	Pool[a]	Measure	Standard[b]	Weight[c]
Program Accomplishments												
Reading Gains	Scored less than **8.5 on TABE 5/6 total reading test** at program entry (or did not take test)	Percentage of students in pool who gain two grades or score 8.5 on follow-up TABE reading test	30 percent	.056	Scored less than **8.5 on TABE 5/6 total reading test** at program entry (or did not take test)	Percentage of students in pool who gain two grades or score 8.5 on follow-up TABE reading test	35 percent	.067	Scored less than **6.7 on TABE 7/8 total reading test** at program entry (or did not take test)	Percentage of students in pool who gain two grades or score **6.7 on follow-up TABE reading test**	40 percent	0
Math Gains	Scored less than **8.5 on TABE 5/6 total math test** at program entry (or did not take test)	Percentage of students in pool who gain two grades or score 8.5 on follow-up TABE math test	33 percent	.056	Scored less than **8.5 on TABE 5/6 total math test** at program entry (or did not take test)	Percentage of students in pool who gain two grades or score 8.5 on follow-up TABE math test	35 percent	.067	Scored less than **7.4 on TABE 7/8 total math test** at program entry (or did not take test)	Percentage of students in pool who gain two grades or score **6.7 on follow-up TABE math test**	45 percent	0
GED Rate	Without high school diploma and **scored 6.3 or above on TABE 5/6 total reading test** at program entry (or did not take test)	Percentage of students in pool who obtain GED/high school degree, including bonus for students who initially score low on test	Model-based	.056	Without high school diploma and **scored 6.3 or above on TABE 5/6 total reading test** at program entry (or did not take test)	Percentage of students in pool who obtain GED/high school degree, including bonus for students who initially score low on test	Model-based	.067	Without high school diploma and **scored 5.2 or above on TABE 7/8 total reading test** at program entry (or did not take test)	Percentage of students in pool who obtain GED/high school degree, including bonus for students who initially score low on test	Model-based	.20
Vocational Completion Rate	**Stayed at least 60 days and participated in a vocational program with an approved training achievement record (TAR)**	Percentage of students in pool who complete vocation at completer or advanced-completer level	56 percent	.167	**All terminees**	Percentage of students in pool who complete vocation at completer or advanced-completer level	45 percent	.20	**All terminees**	Percentage of students in pool who complete vocation at completer or advanced-completer level	45 percent	.20

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TABLE IV.1 *(continued)*

Area/Measure	Program Year 1994				Program Year 1995				Program Year 1996			
	Pool[a]	Measure	Standard[b]	Weight[c]	Pool[a]	Measure	Standard[b]	Weight[c]	Pool[a]	Measure	Standard[b]	Weight[c]
Placement												
Placement Rate	All terminees plus AT/ACT transfers	Percentage of students in pool placed in job/military or school, with bonus for AT/ACT transfers	69 percent	.111	All terminees plus AT/ACT transfers	Percentage of students in pool placed in job/military or school, with bonus for AT/ACT transfers	70 percent	.16	All terminees plus AT/ACT transfers	Percentage of students in pool placed in job/military or school, with bonus for AT/ACT transfers	70 percent	.30
Average Wage	Students placed in a job/military	Average wage	Model-based	.111	Students placed in a job/military	Average wage	Model-based	.08	Students placed in a job/military	Average wage	Model-based	.10
Quality Placement/ Job Training Match Rate	**Vocational completers with a placement record and those with a record that was due but not received**	Percentage placed in a job-training match, with bonus for students placed in college or AT/ACT transfers	51 percent	.111	**All job/military completers**	Percentage placed in a job-training match **(no bonus for students placed in college or ACT)**	42 percent	.08	**All job/military completers**	Percentage placed in a job-training match **(no bonus for students placed in college or ACT)**	50 percent	.10
Full-Time	NA	NA	NA	NA	Students placed in a job/military	Percentage of students placed who are placed full-time	70 percent	.08	Students placed in a job/military	Percentage of students placed who are placed full-time	80 percent	.10
Quality/ Compliance												
ARPA Rating	NA	Regional office rating of center quality/ compliance	100	.333	NA	Regional office rating of center quality/ compliance	100	.20	NA	Regional office rating of center quality/ compliance	NA	0

NA indicates not applicable or no change. Bold type shows elements that changed.

[a] Pool of students is the group included in the denominator of the measure.

[b] Standard is the target that centers are expect to meet.

[c] Weight is the share of the individual outcome measure in each center's overall performance score.

students who scored less than 8.5 on the Test of Adult Basic Education (TABE) 5/6 reading test at entrance should gain two grades or score 8.5 on a follow-up TABE reading test. For two measures--the GED rate and the average wage at placement--a regression model is used to establish each center's standard. The purpose of the regression model is to "level the playing field" in situations where centers face different circumstances that could affect the outcome but that are not within the center's control. By taking into account key factors outside the center's control, the regression model holds the center harmless for being lower (or higher) than average on this factor. For example, the wage model controls for differences in prevailing wages for entry-level workers in different areas, and the GED model controls for differences in state laws governing awarding of the GED. The standards used in PY 1995 were somewhat higher than those used in PY 1994. Although the numerical standards for vocational completion and job-training match were lower in PY 1995 and PY 1996, the standards were actually more demanding, because performance was being judged on a broader pool of students in PY 1995 and PY 1996.

Weights determine how each center's scores on the various measures are combined to arrive at an overall measure of how well the center is performing. During PY 1994 to PY 1996, a center's score on each measure was compared to the standard for the measure to arrive at a percentage of the goal that was met for each measure. A summary measure for each center was then calculated as the weighted sum of the nine percentages (eight in PY 1994; six in PY 1996), using the weights shown in Table IV.1. Centers were then ranked according to these overall measures.

Over time, all elements of the system--measures, standards, and weights--change, and continuous development is evident in the changes from PY 1994 to PY 1996. The main changes were (1) in PY 1996, changing from version 5/6 to version 7/8 of the TABE reading and math tests

used to define pools for measuring reading and math gains and GED completion rates;[1] (2) in PY 1995, broadening the pools of students for whom centers were accountable in calculating vocational completion and job-training match rates; (3) in PY 1995, eliminating a bonus for students placed in college or advanced training on the quality placement measure; and (4) in PY 1995, introducing into the placement score a new measure--the percentage of placements that were full-time. Over time, the importance of placement measures increased and that of quality/compliance measures diminished. The weights placed on the various measures also changed over time, even when the measure remained unchanged. For example, from PY 1994 to PY 1995, the weight given to program accomplishments increased from one-third to 40 percent of the total performance score, the weight given to placement measures increased from one-third to 40 percent, and the weight given to quality compliance was reduced from one-third to 20 percent. In PY 1996, quality compliance was eliminated as a component of performance measurement, and the weight on placement increased from 40 to 60 percent of the score.

During PY 1994 to PY 1996, standards were set in a way that allowed Job Corps managers to identify the top 25 percent of centers and the bottom 25 percent. In general during the study period, Job Corps used historical data to set the standards in such a way that if measured performance did not change the following year, then 25 percent of centers would exceed the high end of the range of their standards, 50 percent would fall between the low end and the high end of their standards, and 25 percent would fall short of the low end.[2] This approach is modified in some years, either because

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[1]In recognition of the changes this was expected to cause, reading and math gains were not included in PY 1996 measured performance, as evidenced by their weight of zero.

[2]More recently, the target has been that 30 percent would exceed the high end and 30 percent would fall below the low end of their standards.

of a desire to focus attention on a specific area or because of a concern that the level is too high or might be perceived as requiring a larger change than can be achieved.

The ranking of centers varied greatly from year to year. For example, less than one-half of centers (50 of 105) were in the same performance quartile in both PY 1994 and PY 1995; the rest changed quartiles between the two years. In light of variability in performance, we sought to identify high-, medium-, and low-performing centers in a way that was based on the centers' performance ranking across the three years. Accordingly, we designated as "high-performing centers" those centers whose performance ranking placed them in the top third of performance rankings during PY 1994, PY 1995, and PY 1996. Similarly, we designated as "low-performing centers" those centers whose performance ranking placed them in the bottom third of the performance ranking during PY 1994, PY 1995, and PY 1996. The remaining centers, which shifted among the terciles or were in the middle tercile for all three years, were designated as "medium-performing centers."[3] With this method, of the centers in PY 1995, 17 were classified as high-performing, 68 as medium-performing, and 18 as low-performing.

B. CHARACTERISTICS OF CENTERS AND STUDENTS

Center performance level is not related to most other center characteristics (Table IV.2). Regions 7/8, 9, and 10 have high proportions of high-performing centers relative to their shares of all centers. In addition, high-performing centers are more likely to offer food service as a trade and less likely to offer masonry, building and maintenance, and service occupations. However, center type, size, and location and whether the center offers a high school diploma are all uncorrelated with performance.

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[3]Two centers had performance rankings only in PY 1994 because they were closed thereafter, and one center had performance rankings only in PY 1995 and PY 1996 because it opened in PY 1995. These centers were classified according to the ranking in the years available.

TABLE IV.2

CENTER CHARACTERISTICS, BY PERFORMANCE LEVEL
(Percentage of Centers in Each Performance Group)

Group	Low-Performing Centers	Medium-Performing Centers	High-Performing Centers	All
Center Type				
Contract	72.2	70.6	70.6	70.9
CCC	27.8	29.4	29.4	29.1
Size				
Small	38.9	33.8	47.1	36.9
Medium	44.4	51.5	35.3	47.6
Large	16.7	14.7	17.7	15.5
Location				
Inner city	16.7	17.7	11.8	16.5
Urban	27.8	20.6	47.1	26.2
Suburban	38.9	35.3	17.7	33.0
Rural	16.7	26.5	23.5	24.3
Region				
1	0.0	5.9	0.0	3.9
2	16.7	7.4	0.0	7.8
3	11.1	13.2	5.9	11.7
4	38.9	22.1	0.0	21.4
5	16.7	7.4	11.8	9.7
6	16.7	13.2	17.7	14.6
7/8	0.0	14.7	23.5	13.6
9	0.0	5.9	23.5	7.8
10	0.0	10.3	17.7	9.7
Offers High School Diploma	11.1	23.5	17.7	20.4
Trades Offered				
Business	94.4	89.7	100.0	92.2
Mechanical	44.4	35.3	41.2	37.9
Service	66.7	52.9	41.2	53.4
Building and maintenance	88.9	86.8	76.5	85.4
Construction	83.3	83.8	82.4	83.5
Carpentry	72.2	85.3	76.5	81.6
Masonry	77.8	66.2	52.9	66.0
Welding	38.9	57.4	64.7	55.3
Health	83.3	75.0	70.6	75.7
Food service	72.2	88.3	100.0	87.4
Other	38.9	39.7	58.8	42.7
Number of Centers	**18**	**68**	**17**	**103**

SOURCE: SPAMIS, On Board Strength Report, PY 1995; National Job Corps Study Center Mail Survey.

The average characteristics of students at low-, medium-, and high-performing centers differ somewhat more (Table IV.3). Compared to medium- and low-performing centers, high-performing centers have a higher percentage of female students; a lower percentage of students who have not completed 12th grade (but no difference in the percentage who are 16 and 17); a higher percentage who are white non-Hispanic, Hispanic, or American Indian, Asian or Pacific Islander; and a lower percentage who are black non-Hispanic.

Figure IV.1 shows the outcomes of the control group to provide some insight into the combined effect of ability, inclination, and opportunities of the control group across the performance groups. In general, control group members in the high-performing centers had better outcomes than those at lower-performing centers. Participation in education and training, attainment of the GED or high school diploma, and attainment of a vocational certificate generally were highest at the high-performing centers and lowest at the low-performing centers. Similarly, average weekly earnings of the control group in year 3 and year 4 were higher and arrests were lower in the high-performing centers than in the low-performing ones (Figure IV.2). While it is impossible to distinguish the effects of greater ability and inclination from the effects of greater opportunity, these patterns are consistent with the generally lower education levels of students assigned to low-performing centers.

C. IMPACTS

We expect that program group members who were assigned to high-performing centers had better outcomes on average than program group members who were assigned to lower-performing centers, for those outcomes used to measure center performance. Thus, we first examine the experiences of the program group by center performance level, and then present impact estimates.

Patterns of outcomes for the program group within each center performance group are consistent with what one would expect based on the design of the performance measurement system described

TABLE IV.3

CHARACTERISTICS OF ELIGIBLE APPLICANTS ASSIGNED TO A TYPICAL CENTER IN EACH PERFORMANCE CATEGORY
(Average Student Characteristics of Centers in Each Performance Group)

	Low-Performing Centers	Medium-Performing Centers	High-Performing Centers
Percentage Female	37.4	38.2	42.4
Percentage 16 to 17 Years Old	44.8	43.9	42.4
Percentage Who Have Not Completed 12th Grade	83.0	80.1	75.9
Percentage White, Non-Hispanic	24.4	34.1	36.5
Percentage Black, Non-Hispanic	62.0	43.4	19.7
Percentage Hispanic	8.8	14.9	28.5
Percentage American Indian, Asian or Pacific Islander, or Other	4.9	7.7	15.3
Percentage Ever Arrested or Charged with Delinquency	27.9	28.6	26.8
Size of Hometown Population			
10,000 or less	18.8	24.8	23.7
10,000 to 50,000	23.1	21.0	18.2
50,000 to 250,000	18.2	18.0	22.3
More than 250,000	39.9	36.2	35.8
Job Corps Region			
1	0.0	5.7	0.0
2	15.1	7.4	0.0
3	10.2	13.4	6.0
4	44.8	21.9	0.0
5	15.0	7.3	11.4
6	14.9	13.3	17.9
7/8	0.0	14.7	22.9
9	0.0	6.0	23.7
10	0.0	10.3	18.1

SOURCE: Baseline interview data.

NOTE: Figures are means of the percentage of students assigned to centers in each center category who possess the indicated attribute. We computed the percentage with a given attribute in each center and then computed the average of the means across centers in a category.

FIGURE IV.1

EDUCATION AND TRAINING ACTIVITIES AND EDUCATIONAL ATTAINMENT OF THE CONTROL GROUP, BY CENTER PERFORMANCE LEVEL

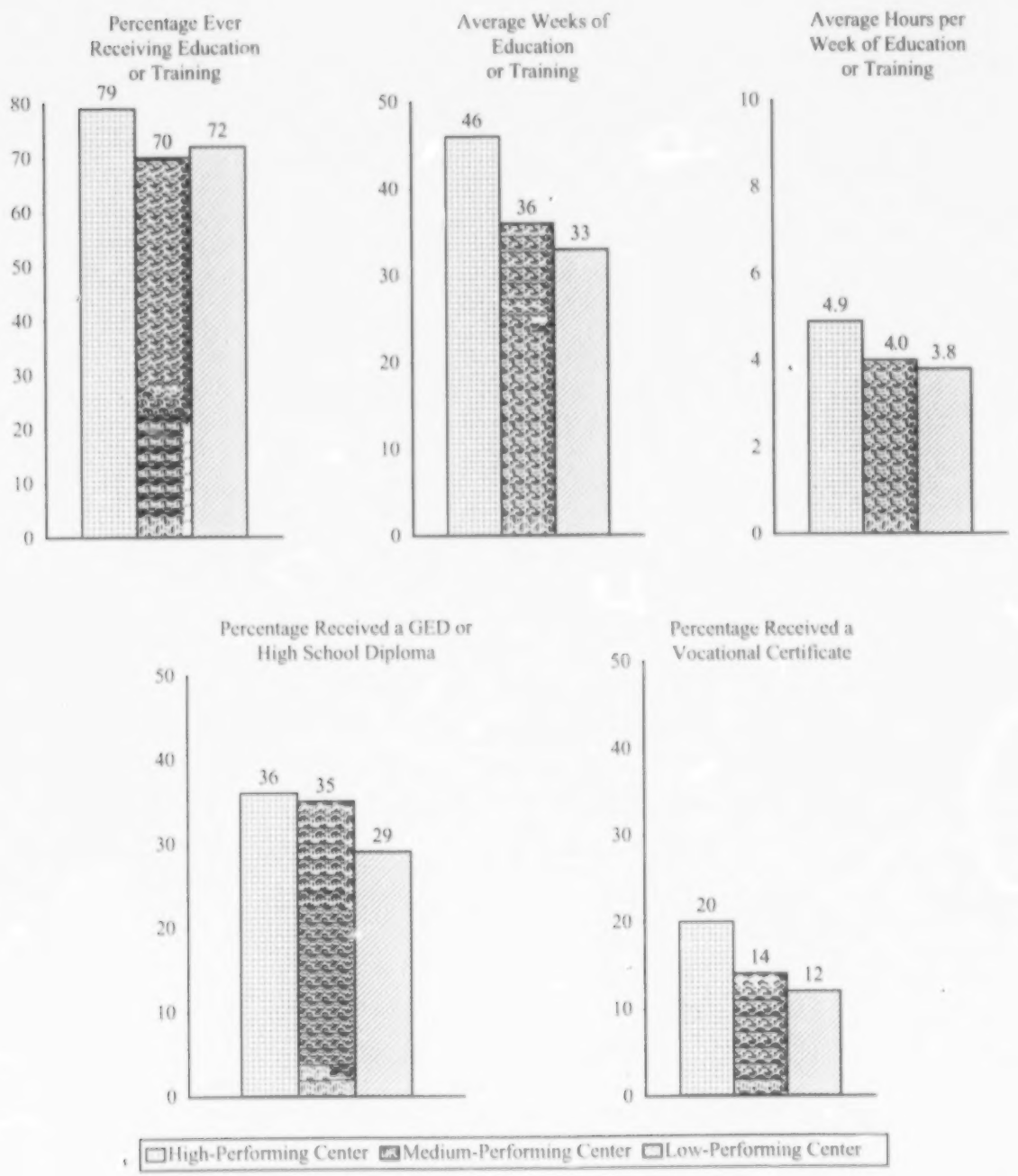
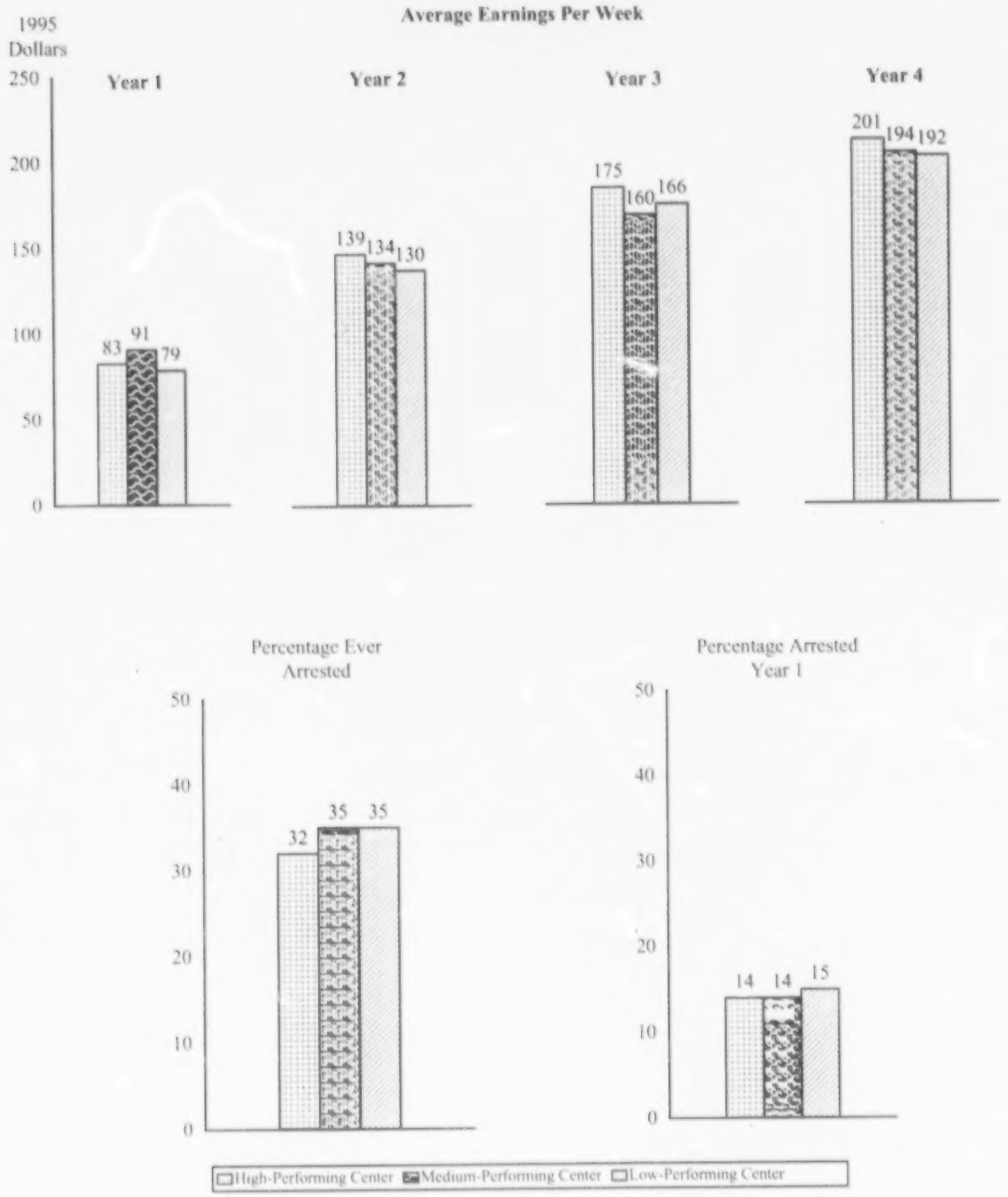


FIGURE IV.2

EARNINGS AND ARRESTS OF THE CONTROL GROUP, BY CENTER SIZE



above. However, the differences among performance groups are small. As Figure IV.3 shows, students at high-performing centers were more likely to receive a GED or high school diploma (53 percent, versus 47 and 46 percent at medium- and low-performing centers), and more likely to receive a vocational certificate (41 percent, versus 38 and 30 percent at medium- and low-performing centers). Those at high-performing centers also participated in education or training for more weeks and more hours than their counterparts at medium- and low-performing centers (Appendix Table A.7). Similarly, average weekly earnings in year 3 and year 4 were highest at high-performing centers and lowest at low-performing centers (Figure IV.3). While these differences in program group outcomes are small and not statistically significant, they consistently exhibit the expected positive relationship between student outcomes and center performance level.

The impacts on education and training services and educational attainment were large across all groups and outcomes. As one would expect from the patterns of differences among the program and control groups at high-, medium-, and low-performing centers, the impacts exhibit no strong patterns (Figure IV.4). For example, the largest impact on receipt of a high school credential (GED or diploma) was found for the low-performing center group; whereas, the impact on receiving a vocational certificate was largest at the medium-performing centers.

Impacts on earnings were substantial (though not always statistically significant) in each center performance group (Figure IV.5). The impact for year 3 earnings was largest at the medium-performing centers ($29) but lower in the high- and low-performing centers ($14 and $9, respectively). The impact for year 4 earnings was largest at the high-performing centers ($29) but of similar size in the medium- and low-performing centers ($23 and $20). Considering the entire 4-year follow-up period, the impacts were largest in the low-performing centers, because the sacrifice of earnings in the first two years of the follow-up period was smaller for students at

FIGURE IV.3

OUTCOMES OF THE PROGRAM GROUP, BY CENTER PERFORMANCE LEVEL

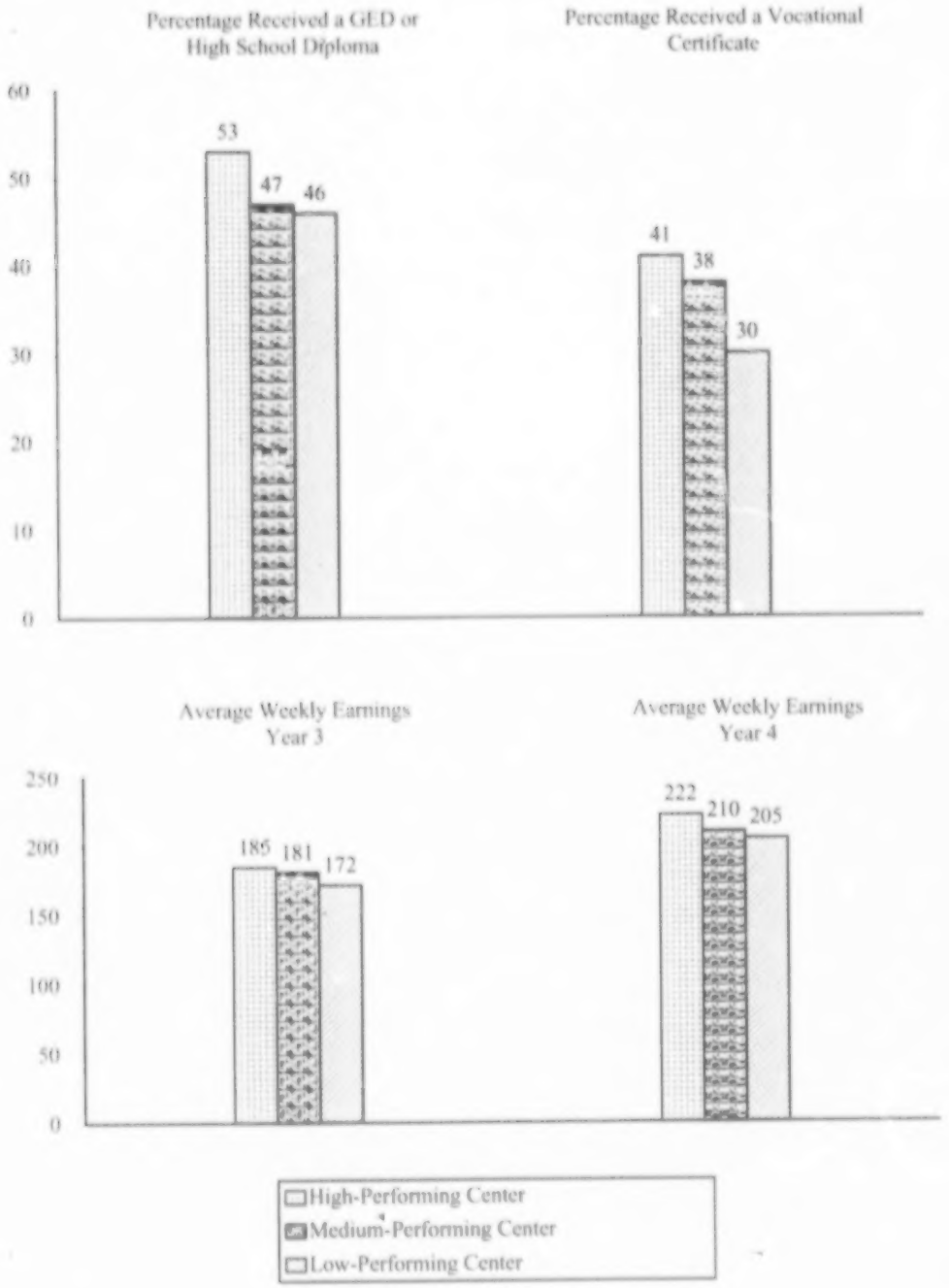
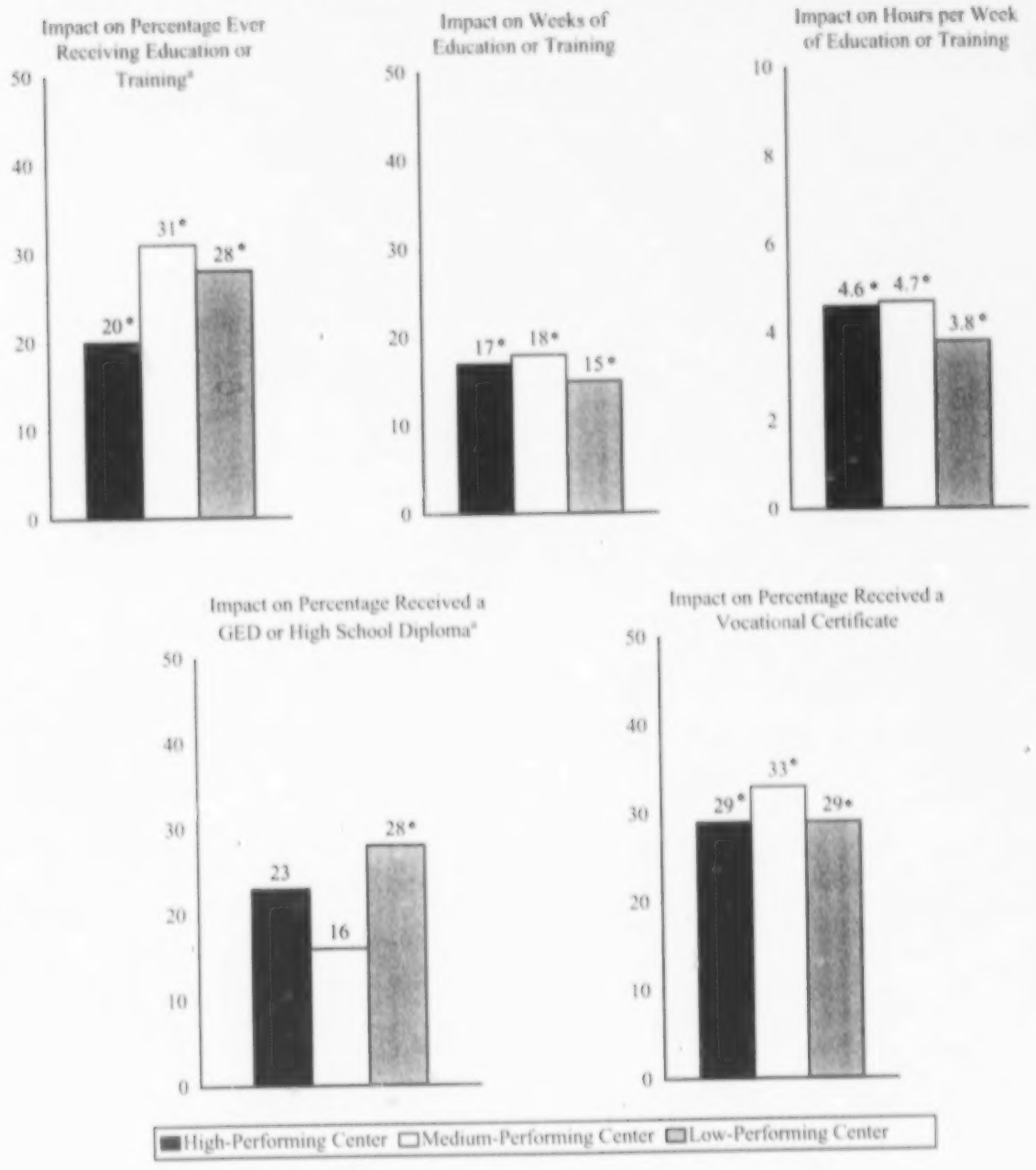


FIGURE IV.4

IMPACTS PER PARTICIPANT ON EDUCATION AND TRAINING SERVICES AND EDUCATIONAL ATTAINMENT, BY CENTER PERFORMANCE LEVEL

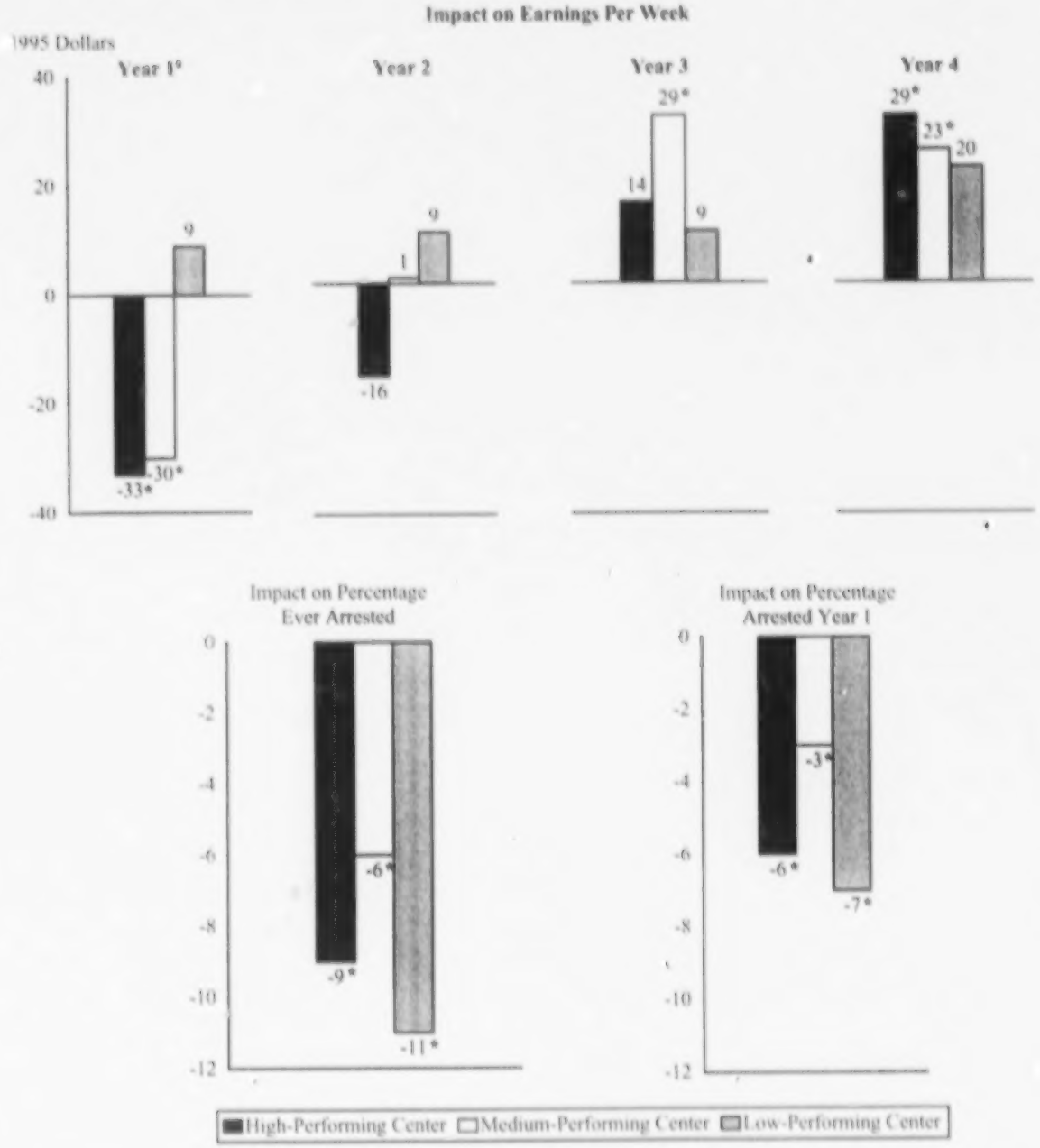


*Estimated impact per participant is statistically significant at the 5 percent level.

[a]Difference in impacts across center performance levels are significantly different from zero at the .10 level, two-tailed test.

FIGURE IV.5

IMPACTS PER PARTICIPANT ON WEEKLY EARNINGS AND ARRESTS, BY CENTER PERFORMANCE LEVEL



*Estimated impact per participant is statistically significant at the 5 percent level.

[a]Difference in impacts across center performance levels are significantly different from zero at the .10 level, two-tailed test.

low-performing centers. From these estimates, we conclude that the impacts on earnings were generally similar across the performance groups.

Finally, impacts on the probability of being arrested during the 4-year follow-up period and during the first year after random assignment are statistically significant in each center group and show relatively small differences across the center performance groupings (Figure IV.5). Impacts were largest in the low-performing centers but nearly as large in the high-performing centers and smallest in the medium-performing centers. However, the differences in impacts are not statistically significant.

D. REASONS FOR THE WEAK RELATIONSHIP BETWEEN CENTER PERFORMANCE AND NET IMPACTS

We find the expected positive relationship between performance levels and Job Corps participant outcomes. Job Corps participants in higher-performing centers generally had better average outcomes than their counterparts in medium- and low-performing centers, although the differences are small. However, no relationship exists between center performance and impacts: low-, medium-, and high-performing centers all had beneficial impacts, most observed differences in impacts across performance levels could be due to chance, and the differences exhibit no pattern suggesting that high-performing centers have larger impacts. Because center performance plays a large role in program management, it is important to understand why impacts are unrelated to center performance.

We believe two factors contribute to the lack of association: (1) differences in student characteristics that are not accounted for in the performance measurement system; and (2) weak correspondence between performance measurement system measures and the survey measures, combined with variability in students' experiences.

1. Student Characteristics

One possible explanation is that high-performing centers do well because they attract better students. Suppose some centers get students with stronger skills at entry, while other centers get students with weaker skills. If students with stronger skills at entry achieve more by the time they leave the program and have better postprogram outcomes, then simple comparisons of student outcomes across centers will not inform us about which centers are contributing more to improving outcomes. In short, good measured performance may result from better "raw material," rather than from greater "value added" by the center.

While some key student characteristics differ across the performance groups, it is not clear that these differences necessarily all favor the high-performing centers. For example, high-performing centers have a larger percentage of female students than lower-performing centers, but they also have a larger percentage of students with a high school credential. A high percentage of female participants might be expected to depress the proportion placed and average wage at placement, since male earnings tend to be higher, other things equal, and the model used to set centers' performance targets for average wage at placement did not control for gender. On the other hand, placement and wages are likely to be positively correlated with the percentage who are high school completers at entry, which favors the higher-performing centers. In addition, the observed differences in average characteristics of students at high- and low-performing centers are small.

The pattern of outcomes for the study control group is a second source of information about the possible effects of student selection. If the outcomes of the control group are better at the high-performing centers than at the low-performing ones, this would also suggest that the combination of student characteristics and labor market conditions favored the high-performing centers.

Indeed, the observed patterns of control group outcomes are consistent with the hypothesis that youths assigned to high-performing centers were more able and/or faced more favorable labor

markets. Control group members assigned to high-performing centers were somewhat more likely to receive training, earn a GED, and receive a vocational training certificate than their counterparts assigned to medium- and low-performing centers. They also had higher weekly earnings and lower arrest rates in years 3 and 4 after random assignment.

The performance measurement system does not control for differences in personal characteristics, and it controls for differences in opportunities only to a limited extent. Program managers have decided that performance expectations should not differ solely because of student characteristics. For example, even if certain gender or ethnic groups can be expected to have lower earnings, program managers have decided that center operators should not be held harmless for variations in the composition of their student body. On the other hand, center operators are held harmless for differences in prevailing wages because performance expectations for the average wage at placement vary across locations. Similarly, they are held harmless for differences in rules relating to GED completion. However, the regression models used to set performance expectations do not control for personal characteristics because expectations are the same for all groups.

2. Weak Association Between Survey Measures and Performance Measurement System Measures

Measurement differences between the study's survey and the performance measurement system and variation in student's outcomes very likely weaken any association that might exist between impacts as measured through the study's survey and center performance as measured through program data. First, with regard to in-program achievements, two key education outcomes from the performance measurement system--reading gains and math gains--are not measured through the survey. In addition, although the survey measure for receiving a GED is conceptually the same as the performance measurement system measure, the survey measure of the percentage receiving a GED includes all students without a high school credential in the pool for estimating the percentage,

whereas the performance measurement system measure restricts the pool to students without a diploma who attained a specific score on the TABE test at program entry. Thus, the performance measurement system uses a more restricted "pool" than we are able to use based on the survey.

The percentage receiving a vocational certificate as measured by the survey is conceptually similar to the percentage who completed vocational training as measured by the performance measurement system (at least as measured from PY 1995 onward). However, the fact that one measure relies on self-reports, while the other relies on program records, may be sufficient to create some artificial differences where no real ones exist.

Similar concerns pertain to the postprogram measures. During the period of the study, all performance measurement system postprogram measures were measured during the six-month period immediately following termination from Job Corps. In contrast, the survey measured impacts during a period 3 and 4 years after random assignment, a period which ranged from 1 to 3 years after program termination. While the performance measurement system measures are selected because they are correlated with longer-term labor market success, the measures are by no means perfect indicators for longer-run measures of success. Indeed, we calculated a measure from the survey data corresponding to the performance measurement system measure that is used to calculate the placement rate. We found that the correlation of this measure with average weekly earnings in year 3 was .12 and the correlation with average weekly earnings in year 4 was .11. While statistically significant, these correlations are well below the perfect correspondence that a correlation of 1.0 would indicate. Similarly, the correlation between hourly wage at placement for those working and average weekly earnings in year 3 is .3. The correlation between hourly wages at placement and weekly earnings in year 4 is .26. These low correlations result because the youths move in and out of jobs. Some who are working or in school soon after Job Corps (placed) are not working in years 3 and 4, while others who are not working after termination (not placed) do work later. Similarly,

the progression in wages over time varies greatly among youths, with the result that the correlation between wages at placement and later weekly earnings is weak. Recognizing the importance of longer-term followup, Job Corps has introduced a measure of job status at 13 weeks after leaving Job Corps. This measure was being collected on a test basis for the first time in PY 1996, but it was not used in calculating performance ranking during that first year of use.

3. Summary and Implications of the Findings

The performance measurement system does not distinguish well among centers with large impacts and centers with small or no impacts. Consistently low-performing centers produced positive impacts that were not distinguishable from the impacts produced by consistently high-performing centers or centers that fell in a middle group that was neither consistently high nor consistently low. This finding is troubling, because the lowest-ranking centers may be penalized financially or otherwise for not showing satisfactory performance, even though they provide the same value added for their students as do high-performing centers.

Finally, even though the system fails to discriminate between centers providing high and low value added, the system may still contribute to better student outcomes. This could occur, for example, because the focus on achieving specific outcomes for each student, which the performance measurement system fosters, improves the Job Corps experience for all students.

REFERENCES

Johnson, T., M. Gritz, R. Jackson, J. Burghardt, C. Boussy, J. Leonard, and C. Orians. "National Job Corps Study: Report on the Process Analysis." Princeton, NJ: Mathematica Policy Research, Inc., February 1999.

Schochet, P., J. Burghardt, and S. Glazerman. "National Job Corps Study: The Impacts of Job Corps on Participants' Employment and Related Outcomes." Princeton, NJ: Mathematica Policy Research, Inc., June 2001.

APPENDIX A

SUPPLEMENTARY TABLES

TABLE A.1

IMPACTS ON EDUCATION SERVICES AND OUTCOMES FOR ELIGIBLE JOB CORPS APPLICANTS ASSIGNED TO A TYPICAL CONTRACT CENTER AND CCC

Center Type	Program Group	Control Group	Impact per Eligible Applicant[a]	Program Group Job Corps Participants	Impact per Participant[b]
Percentage Ever Participated in Education or Training During 48-Month Follow-Up Period					
Contract	92.4	72.5	19.9***	100.2	27.8***
CCC	92.8	71.1	21.7***	100.3	30.7***
All Centers	92.5	72.1	20.4***	100.3	28.7***
Average Weeks Enrolled in Education or Training					
Contract	50.3	37.6	12.6***	56.5	17.7***
CCC	45.9	35.1	10.8***	50.9	15.3***
All Centers	49.0	36.9	12.1***	54.9	17.0***
Average Hours per Week Enrolled in Education or Training					
Contract	7.4	4.1	3.3***	8.9	4.6***
CCC	7.0	4.0	3.0***	8.5	4.2***
All Centers	7.3	4.1	3.2***	8.8	4.5***
Percentage Received a GED					
Contract	41.9	27.2	14.7***	46.5	20.6***
CCC	43.4	27.1	16.3***	47.0	23.1***
All Centers	42.3	27.1	15.2***	46.7	21.4***
Percentage Received a High School Diploma[c]					
Contract	4.7	7.7	-3.0***	3.8	-4.2***
CCC	6.4	6.1	0.3	6.2	0.4
All Centers	5.2	7.2	-2.0***	4.5	-2.8***

TABLE A.1 *(continued)*

Center Type	Program Group	Control Group	Impact per Eligible Applicant[a]	Program Group Job Corps Participants	Impact per Participant[b]
Percentage Received a GED or High School Diploma					
Contract	46.9	35.1	11.8***	50.8	16.5***
CCC	50.1	33.5	16.6***	53.5	23.5***
All Centers	47.9	34.6	13.2***	51.6	18.6***
Percentage Received a Vocational Certificate					
Contract	37.3	13.9	23.3***	44.4	32.7***
CCC	35.3	14.5	20.8***	43.0	29.4***
All Centers	36.7	14.1	22.6***	44.0	31.8***

SOURCE: Baseline, 12- and 30-month interview data for those who completed 30-month interviews.

[a]Estimated impacts per eligible applicant are measured as the difference between the weighted means for program and control group members.

[b]Estimated impacts per Job Corps participant are measured as the estimated impacts per eligible applicant divided by the proportion of program group members who enrolled in Job Corps. Standard errors for these estimates were inflated to account for the estimation error in the Job Corps participation rate.

[c]Differences in impacts across operator type are statistically different from zero at the .10 level, two-tailed test.

*Significantly different from zero at the .10 level, two-tailed test.
**Significantly different from zero at the .05 level, two-tailed test.
***Significantly different from zero at the .01 level, two-tailed test.

TABLE A.2

IMPACTS ON AVERAGE WEEKLY EARNINGS AND ARRESTS FOR ELIGIBLE JOB CORPS APPLICANTS ASSIGNED TO A TYPICAL CONTRACT CENTER AND CCC

Center Type	Program Group	Control Group	Impact per Eligible Applicant[a]	Program Group Job Corps Participants	Impact per Participant[b]
Weekly Earnings					
Contract Centers					
Year 1	65.6	87.8	-22.2***	52.9	-31.1***
Year 2	126.9	129.6	-2.7	122.0	-3.8
Year 3	171.3	155.1	16.2***	173.5	22.7***
Year 4	204.0	185.7	18.4***	206.1	25.7***
CCCs					
Year 1	75.3	86.6	-11.3*	61.5	-16.0*
Year 2	150.2	144.1	6.1	148.2	8.7
Year 3	202.0	185.8	16.2	198.6	22.9
Year 4	229.8	216.9	12.9	229.2	18.3
All Centers					
Year 1	68.4	87.4	-19.1***	55.3	-26.8***
Year 2	133.5	133.7	-0.2	129.4	-0.2
Year 3	180.1	163.8	16.2***	180.7	22.8***
Year 4	211.4	194.6	16.8***	212.7	23.6***
Arrests					
Ever Arrested					
Contract	27.4	31.9	-4.5***	26.5	-6.3***
CCC	36.1	42.4	-6.3**	33.9	-8.9**
All	29.9	34.9	-5.0***	28.6	-7.0***
Arrested First Year					
Contract	10.9	13.4	-2.5***	9.5	-3.5***
CCC	15.0	18.3	-3.3	11.8	-4.6
All	12.1	14.8	-2.7***	10.2	-3.8***

SOURCE: Baseline, 12- and 30-month interview data for those who completed 30-month interviews.

[a]Estimated impacts per eligible applicant are measured as the difference between the weighted means for program and control group members.

[b]Estimated impacts per Job Corps participant are measured as the estimated impacts per eligible applicant divided by the proportion of program group members who enrolled in Job Corps. Standard errors for these estimates were inflated to account for the estimation error in the Job Corps participation rate.

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TABLE A.2 *(continued)*

[c]Differences in impacts across operator type are significantly different from zero at the .10 level, two-tailed test.

*Significantly different from zero at the .10 level, two-tailed test.
**Significantly different from zero at the .05 level, two-tailed test.
***Significantly different from zero at the .01 level, two-tailed test.

TABLE A.3

IMPACTS ON EDUCATION SERVICES AND OUTCOMES FOR ELIGIBLE JOB CORPS APPLICANTS ASSIGNED TO A TYPICAL CENTER IN EACH SIZE CATEGORY

Center Size Group	Program Group	Control Group	Impact per Eligible Applicant[a]	Program Group Job Corps Participants	Impact per Participant[b]
Percentage Ever Participated in Education or Training During 48-Month Follow-Up Period					
Small Centers	93.2	72.7	20.6***	100.1	28.7***
Medium Centers	91.6	71.3	11.9***	100.0	29.0***
Large Centers	93.7	73.3	20.4***	100.0	27.6***
All Centers	92.5	72.1	20.4***	100.0	28.7***
Average Weeks Enrolled in Education or Training					
Small Centers	46.5	35.5	11.0***	51.4	15.3***
Medium Centers	49.3	37.4	11.9***	56.1	17.1***
Large Centers	54.2	38.7	15.5***	59.6	21.0***
All Centers	49.0	36.9	12.1***	54.9	17.0***
Average Hours per Week Enrolled in Education or Training[c]					
Small Centers	7.1	4.2	3.0***	8.5	4.1***
Medium Centers	7.2	4.1	3.2***	8.8	4.6***
Large Centers	8.0	4.1	3.9***	9.4	5.3***
All Centers	7.3	4.1	3.2***	8.8	4.5***
Percentage Received a GED					
Small Centers	41.4	26.2	15.1***	45.4	21.1***
Medium Centers	42.9	28.8	14.2***	47.5	20.2***
Large Centers	42.8	24.1	18.8***	47.3	25.4**
All Centers	42.3	27.1	15.2***	46.7	21.4***

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TABLE A.3 *(continued)*

Center Size Group	Program Group	Control Group	Impact per Eligible Applicant[a]	Program Group Job Corps Participants	Impact per Participant[b]
Percentage Received a High School Diploma[c]					
Small Centers	5.8	6.4	-0.5	5.1	-0.8
Medium Centers	4.6	7.1	-2.5***	4.1	-3.6***
Large Centers	5.5	9.8	-4.3	4.3	-5.9***
All Centers	5.2	7.2	-2.0***	4.5	-2.8***
Percentage Received a GED or High School Diploma					
Small Centers	47.5	32.9	14.6***	50.9	20.3***
Medium Centers	47.9	36.1	11.7***	52.0	16.8***
Large Centers	48.8	34.2	14.6	52.1	19.8***
All Centers	47.9	34.6	13.2***	51.6	18.6***
Percentage Received a Vocational Certificate[c]					
Small Centers	34.9	14.2	20.7***	41.8	28.9***
Medium Centers	37.8	12.9	24.9***	45.5	35.7***
Large Centers	37.5	17.7	19.8***	44.8	26.8***
All Centers	36.7	14.1	22.6***	44.0	31.8***

SOURCE: Baseline, 12- and 30-month interview data for those who completed 30-month interviews.

[a]Estimated impacts per eligible applicant are measured as the difference between the weighted means for program and control group members.

[b]Estimated impacts per Job Corps participant are measured as the estimated impacts per eligible applicant divided by the proportion of program group members who enrolled in Job Corps. Standard errors for these estimates were inflated to account for the estimation error in the Job Corps participation rate.

[c]Differences in impacts across center size groups are significantly different from zero at the .10 level, two-tailed test.

*Significantly different from zero at the .10 level, two-tailed test.
**Significantly different from zero at the .05 level, two-tailed test.
***Significantly different from zero at the .01 level, two-tailed test.

TABLE A.4

IMPACTS ON EARNINGS AND ARRESTS FOR ELIGIBLE JOB CORPS APPLICANTS ASSIGNED TO A TYPICAL CENTER IN EACH SIZE CATEGORY

Center Size Group	Program Group	Control Group	Impact per Eligible Applicant[a]	Program Group Job Corps Participants	Impact per Participant[b]
Weekly Earnings					
Small Centers					
Year 1[c]	70.7	85.1	-14.4***	58.3	-20.1
Year 2	136.4	141.4	-5.0	135.3	-7.0
Year 3	187.9	180.5	7.3	188.0	10.3
Year 4	218.1	206.9	11.2	219.2	15.7
Medium Centers					
Year 1[c]	67.0	88.9	-21.9***	53.8	-31.4
Year 2	131.3	128.9	2.4	124.5	3.5
Year 3	171.5	150.8	20.7***	171.6	29.6***
Year 4	202.0	184.3	17.7***	202.4	25.3***
Large Centers					
Year 1[c]	67.5	88.4	-20.9***	53.1	-28.4***
Year 2	134.0	131.2	2.9	130.4	3.9
Year 3	188.9	166.1	22.9***	191.1	31.0***
Year 4	225.4	197.9	27.5***	228.7	37.3***
Arrests					
Ever Arrested[d]					
Small	32.7	40.1	-7.3***	30.9	-10.2***
Medium	29.3	33.9	-4.5***	28.3	-6.5***
Large	25.1	26.0	-0.9	24.0	-1.3
All	29.9	34.9	-5.0***	28.6	-7.0***
Arrested First Year					
Small	14.2	17.3	-3.1*	11.6	-4.3*
Medium	11.4	13.6	-2.2*	9.7	-3.1*
Large	9.2	12.7	-3.5***	8.6	-4.8***
All	12.1	14.8	-2.7***	10.2	-3.8***

SOURCE: Baseline, 12- and 30-month interview data for those who completed 30-month interviews.

[a]Estimated impacts per eligible applicant are measured as the difference between the weighted means for program and control group members.

TABLE A.4 *(continued)*

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[b]Estimated impacts per Job Corps participant are measured as the estimated impacts per eligible applicant divided by the proportion of program group members who enrolled in Job Corps. Standard errors for these estimates were inflated to account for the estimation error in the Job Corps participation rate.

[c]Differences in impacts across center size groups are significantly different from zero at the .10 level, two-tailed test.

*Significantly different from zero at the .10 level, two-tailed test.
**Significantly different from zero at the .05 level, two-tailed test.
***Significantly different from zero at the .01 level, two-tailed test.

TABLE A.5

IMPACTS ON EDUCATION SERVICES AND OUTCOMES FOR ELIGIBLE JOB CORPS APPLICANTS ASSIGNED TO A TYPICAL CENTER IN EACH REGION

Region	Program Group	Control Group	Impact per Eligible Applicant[a]	Program Group Job Corps Participants	Impact per Participant[b]
Ever Participated in Education or Training During 48-Month Follow-Up Period[c]					
1	92.7	75.9	16.7***	100.0	22.1**
2	92.6	77.9	14.7***	100.0	23.6***
3	91.8	75.4	16.3***	100.0	23.2***
4	91.9	66.0	25.9***	100.0	36.7***
5	94.4	72.4	22.0***	100.0	31.7***
6	90.9	71.7	19.1***	100.0	26.1***
7/8	92.3	72.3	20.0***	100.0	28.2***
9	95.2	79.9	15.3***	100.0	20.0***
10	93.3	69.9	23.4***	100.0	31.9***
Average Hours per Week Enrolled in Education or Training[c]					
1	7.0	4.6	2.4***	8.5	3.1***
2	6.6	4.5	2.1**	8.6	3.4**
3	7.3	4.8	2.5***	8.6	3.6***
4	6.6	3.3	3.3***	8.0	4.7***
5	7.1	4.2	2.9***	8.4	4.1***
6	7.4	4.2	3.2***	9.0	4.4***
7/8	7.4	3.9	3.5***	8.9	4.9***
9	9.1	4.8	4.4***	10.5	5.7***
10	8.1	4.0	4.1***	9.8	5.6***

TABLE A.5 *(continued)*

Region	Program Group	Control Group	Impact per Eligible Applicant[a]	Program Group Job Corps Participants	Impact per Participant[b]
Percentage Received a GED					
1	42.9	32.7	10.2*	46.5	13.5*
2	49.8	33.6	16.2**	56.1	26.1**
3	44.6	31.2	13.4***	47.9	19.0***
4	34.8	24.1	10.7***	37.5	15.1***
5	47.7	27.4	20.3***	53.3	29.1***
6	39.6	20.3	19.3***	44.6	26.4***
7/8	41.2	30.8	10.5***	45.8	14.8***
9	41.0	22.7	18.3***	44.9	24.0***
10	54.8	31.9	22.9***	60.6	31.2***
Percentage Received a High School Diploma					
1	5.4	10.8	-5.4*	5.1	-7.2*
2	3.9	6.9	-3.0	4.0	-4.9
3	5.0	8.6	-3.6**	3.5	-5.0**
4	3.2	3.7	-0.5	2.9	-0.7
5	7.3	8.4	-1.2	6.8	-1.7
6	3.7	6.0	-2.3	3.2	-3.2
7/8	8.2	10.1	-1.9	8.2	-2.7
9	4.9	12.0	-7.0***	4.0	-9.2***
10	7.4	6.8	0.6	4.6	0.8
Percentage Received a GED or High School Diploma					
1	49.6	43.8	5.7	53.0	7.6
2	54.3	42.5	11.8	60.7	19.0
3	49.9	39.9	10.1***	51.8	14.3***
4	38.0	27.9	10.2***	40.5	14.4***

TABLE A.5 *(continued)*

Region	Program Group	Control Group	Impact per Eligible Applicant[a]	Program Group Job Corps Participants	Impact per Participant[b]
5	55.4	35.9	19.4***	60.6	27.9***
6	43.8	26.5	17.3***	48.4	23.6***
7/8	49.7	41.2	8.5**	54.4	12.0**
9	46.6	35.3	11.4***	49.6	14.9***
10	62.7	39.1	23.6***	65.8	32.1***
Percentage Received a Vocational Certificate[c]					
1	42.5	14.2	28.3***	49.4	37.3***
2	33.7	14.3	19.4***	38.4	31.2***
3	35.9	18.8	17.1***	43.0	24.3***
4	32.6	11.2	21.4***	39.1	30.3***
5	38.3	14.5	23.8***	46.8	34.2***
6	37.5	11.9	25.6***	43.9	35.0***
7/8	35.7	17.2	18.5***	44.3	26.1***
9	44.3	17.9	26.4***	53.2	34.5***
10	40.1	10.6	29.5***	47.8	40.2***

SOURCE: Baseline, 12- and 30-month interview data for those who completed 30-month interviews.

[a]Estimated impacts per eligible applicant are measured as the difference between the weighted means for program and control group members.

[b]Estimated impacts per Job Corps participant are measured as the estimated impacts per eligible applicant divided by the proportion of program group members who enrolled in Job Corps. Standard errors for these estimates were inflated to account for the estimation error in the Job Corps participation rate.

[c]Differences in impacts across region are significantly different from zero at the .10 level, two-tailed test.

*Significantly different from zero at the .10 level, two-tailed test.
**Significantly different from zero at the .05 level, two-tailed test.
***Significantly different from zero at the .01 level, two-tailed test.

TABLE A.6

IMPACTS ON EARNINGS AND ARRESTS FOR ELIGIBLE JOB CORPS APPLICANTS ASSIGNED TO A TYPICAL CENTER IN EACH REGION

Region	Program Group	Control Group	Impact per Eligible Applicant[a]	Program Group Job Corps Participants	Impact per Participant[b]
Earnings Per Week--Year 3[c]					
1	186.4	176.9	9.5	187.1	12.6
2	184.2	151.6	32.6	168.3	52.4
3	157.5	169.2	-11.7	160.4	-16.6
4	170.8	154.8	15.9*	170.2	22.6*
5	189.7	156.9	32.7***	192.3	47.0***
6	172.2	147.1	25.1**	175.1	34.3**
7/8	184.7	186.1	-1.4	184.8	-2.0
9	181.6	176.5	5.1	189.3	6.7
10	218.2	173.9	44.3***	218.3	60.4***
Earnings Per Week--Year 4					
1	215.1	211.8	3.6	205.5	4.8
2	202.1	187.0	15.1	195.6	24.4
3	198.2	201.5	-3.3	200.0	-4.7
4	208.5	178.9	29.7***	213.7	42.0***
5	220.3	186.9	33.4**	226.3	48.0**
6	194.7	183.0	11.7	194.9	16.0
7/8	216.8	205.7	11.2	218.4	15.8
9	222.4	217.7	4.8	229.6	6.2
10	240.5	216.0	24.5	232.5	33.3

TABLE A.6 *(continued)*

Region	Program Group	Control Group	Impact per Eligible Applicant[a]	Program Group Job Corps Participants	Impact per Participant[b]
Percentage Ever Arrested[c]					
1	27.0	32.0	-5.1***	25.5	-6.7
2	33.1	32.4	0.7	31.3	1.1
3	23.9	34.1	-10.1***	22.1	-14.4***
4	32.7	39.8	-7.2***	32.8	-10.1***
5	30.2	34.6	-4.4	31.8	-6.4
6	26.4	32.3	-5.9**	25.8	-8.0**
7/8	39.0	42.8	-3.8	35.9	-5.4
9	21.9	18.0	4.0	20.4	5.2
10	27.9	34.2	-6.3	23.5	-8.6
Percentage Arrested Year 1					
1	11.8	15.1	-3.4	9.9	-4.5
2	18.4	17.4	0.9	12.2	1.5
3	10.6	14.9	-4.3**	9.2	-6.1**
4	12.4	16.0	-3.5*	11.0	-5.0*
5	10.7	14.6	-3.9*	10.1	-5.6*
6	10.3	11.5	-1.2	9.7	-1.7
7/8	16.8	18.3	-1.5	14.0	-2.1
9	6.9	7.8	-0.8	6.4	-1.1
10	9.7	15.5	-5.8*	6.9	-7.8

SOURCE: Baseline, 12- and 30-month interview data for those who completed 30-month interviews.

[a]Estimated impacts per eligible applicant are measured as the difference between the weighted means for program and control group members.

TABLE A.6 *(continued)*

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[b]Estimated impacts per Job Corps participant are measured as the estimated impacts per eligible applicant divided by the proportion of program group members who enrolled in Job Corps. Standard errors for these estimates were inflated to account for the estimation error in the Job Corps participation rate.

[c]Differences in impacts across regions are significantly different from zero at the .10 level, two-tailed test.

*Significantly different from zero at the .10 level, two-tailed test.
**Significantly different from zero at the .05 level, two-tailed test.
***Significantly different from zero at the .01 level, two-tailed test.

TABLE A.7

IMPACTS ON EDUCATION SERVICES AND OUTCOMES FOR ELIGIBLE JOB CORPS APPLICANTS ASSIGNED TO A TYPICAL HIGH-, MEDIUM-, AND LOW-PERFORMING CENTER

Center Performance	Program Group	Control Group	Impact per Eligible Applicant[a]	Program Group Job Corps Participants	Impact per Participant[b]
Percentage Ever Participated in Education or Training During 48-Month Follow-Up Period[c]					
High	93.1	78.9	14.3****	100	19.6***
Medium	93.0	70.4	22.6***	100	31.0***
Low	90.2	72.0	18.2***	100	28.4***
All	92.5	72.1	20.4***	100	28.7***
Average Weeks Enrolled in Education or Training					
High	58.4	46.2	12.2***	64.0	16.7***
Medium	48.5	35.8	12.8***	54.3	17.5***
Low	42.6	33.1	9.5***	48.3	14.8***
All	49.0	36.9	12.1***	54.9	17.0***
Average Hours per Week Enrolled in Education or Training					
High	8.3	4.9	3.4***	10.0	4.6***
Medium	7.4	4.0	3.4***	8.8	4.7***
Low	6.3	3.8	2.5***	7.8	3.8***
All	7.3	4.1	3.2***	8.8	4.5***
Percentage Received a GED[d]					
High	46.5	26.6	20.3***	52.8	27.9***
Medium	41.5	28.6	12.9***	45.8	17.8***
Low	41.3	22.8	18.5***	44.3	28.9***
All	42.3	27.1	15.2***	46.7	21.4***

TABLE A.7 *(continued)*

Center Performance	Program Group	Control Group	Impact per Eligible Applicant[a]	Program Group Job Corps Participants	Impact per Participant[b]
Percentage Received a High School Diploma					
High	5.7	9.3	-3.7**	4.7	-5.0**
Medium	5.3	7.5	-2.1**	4.8	-2.9**
Low	4.2	4.6	-0.4	3.2	-0.6
All	5.2	7.2	-2.0***	4.5	-2.8***
Percentage Received a GED or High School Diploma					
High	49.0	35.9	13.1***	56.8	18.8***
Medium	48.9	35.3	13.6***	52.2	18.9***
Low	44.2	29.3	15.0***	45.6	22.6***
All	47.9	34.6	13.2***	51.6	18.6***
Percentage Received a Vocational Certificate					
High	40.8	19.7	21.1***	49.2	29.0***
Medium	37.6	13.5	24.1***	44.6	33.1***
Low	30.2	11.5	18.7***	36.9	29.2***
All					

SOURCE: Baseline, 12- and 30-month interview data for those who completed 30-month interviews.

[a]Estimated impacts per eligible applicant are measured as the difference between the weighted means for program and control group members.

[b]Estimated impacts per Job Corps participant are measured as the estimated impacts per eligible applicant divided by the proportion of program group members who enrolled in Job Corps. Standard errors for these estimates were inflated to account for the estimation error in the Job Corps participation rate.

[c]Differences in impacts across performance groups are significantly different from zero at the .10 level, two-tailed test.

*Significantly different from zero at the .10 level, two-tailed test.
**Significantly different from zero at the .05 level, two-tailed test.
***Significantly different from zero at the .01 level, two-tailed test.

TABLE A.8

IMPACTS ON EARNINGS AND ARRESTS FOR ELIGIBLE JOB CORPS APPLICANTS ASSIGNED TO A TYPICAL HIGH-, MEDIUM-, AND LOW-PERFORMING CENTER

Center Performance	Program Group	Control Group	Impact per Eligible Applicant[a]	Program Group Job Corps Participants	Impact per Participant[b]
Weekly Earnings					
High-Performing Centers					
Year 1	59.3	83.3	-24.1***	42.4	-33.1***
Year 2	127.4	138.7	-11.3	124.1	-15.6
Year 3	185.2	174.7	10.5	185.4	14.3
Year 4	222.2	201.3	20.9*	222.7	28.7*
Medium-Performing Centers					
Year 1	69.3	91.1	-21.8***	57.3	-30.0***
Year 2	134.4	133.5	0.9	130.0	1.3
Year 3	181.3	160.4	20.8***	182.4	28.6***
Year 4	210.6	193.6	16.9***	209.7	23.3***
Low-Performing Centers					
Year 1	73.1	78.6	-5.5	60.3	-8.6
Year 2	135.9	130.3	5.6	132.1	8.7
Year 3	171.7	166.1	5.5	169.4	8.6
Year 4	205.2	192.3	12.9	214.7	20.1
Percentage Ever Arrested					
High	25.5	32.2	-6.7**	22.6	-9.2**
Medium	30.7	34.9	-4.2***	29.9	-5.7***
Low	26.9	34.7	-7.8***	24.8	-10.7***
All	29.9	34.9	-5.0***	28.6	-7.0***
Percentage Arrested Year 1					
High	9.4	14.0	-4.6**	8.0	-6.3**
Medium	12.2	14.4	-2.2**	11.0	-3.0**
Low	10.2	14.9	-4.7***	8.7	-6.5***
All	12.1	14.8	-2.7***	10.2	-3.8***

SOURCE: Baseline, 12- and 30-month interview data for those who completed 30-month interviews.

[a]Estimated impacts per eligible applicant are measured as the difference between the weighted means for program and control group members.

TABLE A.8 *(continued)*

[b]Estimated impacts per Job Corps participant are measured as the estimated impacts per eligible applicant divided by the proportion of program group members who enrolled in Job Corps. Standard errors for these estimates were inflated to account for the estimation error in the Job Corps participation rate.

[c]Differences in impacts across performance groups are significantly different from zero at the .10 level, two-tailed test.

*Significantly different from zero at the .10 level, two-tailed test.
**Significantly different from zero at the .05 level, two-tailed test.
***Significantly different from zero at the .01 level, two-tailed test.